THE CULTIVATOR.

TO IMPROVE THE SOIL AND THE MIND.

NEW SERIES. ALBANY, APRIL, 1852. VOL. IX.—No. 4.

Inaccuracy in Farming.

WE are unwilling to believe the frequent remark that farmers are less intelligent than other classes of the community, or that their business is less perfected than that of many other professions. A great deal of uncertainty and conflicting views exist, it is true, with regard to many points in their practice. But we must not forget that even what are termed, by way of eminence, the learned professions, furnish plenty of examples of similar differences of opinion. The "glorious uncertainty of the law" is proverbial, in spite of the thousands of wise heads which have exerted their shrewdness for centuries to establish uniform justice; for even at the present day the most profound jurist is in some cases at a loss to say whether he may or may not be actually committing a crime against the law; and the greatest giant in legal achievement is he who can creep through the smallest key-hole of technical evasion. If we look at medicine, we shall hardly regard all difficulties settled, when there are almost as many systems for keeping the corporeal machine in repair, as there are changes in Parisian fashions,—while cold water, hot water, steam and red-pepper, alternately exert their powers on the same disease; and cakes of ice and cantharides, mineral poisons and vegetable poisons, mercury and mesmerism, are in the same moment lauded and denounced. Nor shall we, in taking large masses of people together, find more general intelligence among carpenters, tailors, blacksmiths, bricklayers, and butchers, than in the agricultural community. All of them furnish occasional examples of brilliant mental achievement, and many of singular stupidity.

But there is one particular in which the farmers are decidedly in the back ground. It is one in which they have no adequate idea of the immense loss they are sustaining. A thorough reformation in this particular, the country over, would effect as great a change in the art of tillage, as railroads have achieved in the art of travelling, or steam engines in manufactures. The deficiency we here refer to, is the want of rigid accuracy, by weighing and measuring, in conducting the various operations on a farm, and recording the results systematically.

The correction of this evil would immediately do more to improve and render profitable this great art of arts, than all that chemistry, botany, geology, subsoiling, and tile-draining could ever accomplish without it. It would be perfectly astonishing what an amount of fog and cobwebs would be cleared away from agriculture in a few years, if it could be thoroughly and universally applied in practice. We have heard of a certain Yankee ship-captain who kept his "reckoning" upon a shingle; which answered a very good purpose in connexion with some shrewd guessing, until a fellow-countryman on board, in a idle hour thoughtlessly whittled it all away. Yet he possessed a decided advantage over many farmers, who keep no reckoning whatever. They find out perhaps at the end of the year or at the end of the third year at furthest, by the amount of their debts, which way their vessel is drifting, or whether they are making any progress; but what it is that gives the impetus,—whether favorable gales, turned to the best advantage,—or beating against the wind to great disadvantage,—or even rowing with main strength with no wind at all,—they have an exceedingly indefinite knowledge at best.

To come a little more to particulars. There is not one farmer in a hundred but will apply his most skilful mathematics in reaching the precise value of what passes out of his hands—the produce dealer cannot defraud him of a single half-dime. The most accurate balance, and the most correct measure, give the true amount of all he sells. But in all the transactions with his own farm—transactions in which it is of the highest moment that he should know whether he is gainer or loser—everything is enveloped in the darkness of uncertainty. He may not know after years of trial, whether his profits or losses preponderate in the making of pork,—in the fattening of beef,—in the manufacture of cheese,—in the cultivation of grain,—in deep or shallow plowing,—in coarse or fine wool sheep,—in rounded Berkshires, or clipper-built land-pikes,—or in anything else which may be done or managed in two ways. A good farmer informed us that he had found "a decided benefit" in a dressing of leached ashes to his fields; but the measured amount of benefit, or the number of bushels applied per acre, were hid in the mists of conjecture; consequently he was unable to say whether it would pay to draw ashes for manure two miles or ten. Another had used shell-marl under the same circumstances and with a like unknown result. A third had found an increase in his crops from the use of swamp-muck, but whether this increase would repay the expense, double, or quadruple it, remained locked up with the secrets of the unknown.

What should we think of a railroad company that should conduct all their internal arrangements by guesses; which should spend days at the end of each half year in discussing, arguing, and trying to estimate the profits of the road, with a view to declaring a dividend? The balance sheet of a bank or other corporation must not

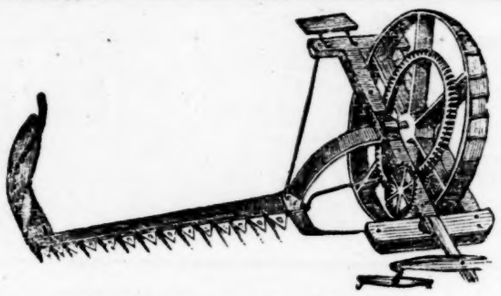
contain an error of a single cent; why should not the farmer know all his accounts with his fields with a faint degree of the same accuracy? The cotton manufacturer can tell to a fraction the cost of his fabric; but how few even among our best agriculturists know how much a certain animal, or a bushel of grain, has cost them; and what seems still more surprising is that after numerous premiums have been offered by agricultural societies, we are still very much in the dark about the comparative value of roots and grain, of ground and unground food, of the best way of raising potatoes, and of a multitude of other points of great importance, and of which weighing and measuring would soon furnish at least a proximate knowledge.

If a single farmer would expend fifty dollars a year in the time and labor required to measure his fields or portions of them; to reckon accurately the amount of manure applied to each portion; to record faithfully the quantity of labor expended; and the number of bushels yielded; if he would try some of the best modes for the feeding and management of cattle, horses, sheep, and swine, in connexion with different breeds or fragments of such breeds, he could scarcely fail to possess in ten years an amount of knowledge not at present enjoyed by one in ten thousand. What then would be the condition of the art, if every intelligent cultivator should adopt a similar course,—what an accumulation of valuable knowledge would be thrown together;—what a clear sun-light would be sent into every dark corner of doubt, and the dim objects of twilight become clear and obvious in full glare of day.

Nearly the whole expense for beginning this proposed improvement is a weighing machine like a hay-scale, in which cattle, loads of hay, &c. may be quickly examined; towhich may be added a common grocer's or miller's balance for smaller objects; baskets of accurate measurement, half-bushel measures, gallon and quart measures, a tape-line for measuring land, and cart-bodies and wagon-boxes with accurately estimated contents. Weighing animals once a week during the various experiments in fattening could be quickly accomplished with such convenient scales; and the small platform balance would enable one in a moment to determine the weight of a cow's milk or butter, a fleece of wool, or a bushel of grain. It is the want of facilities of this kind that deters many from accuracy.

If any of our readers wish definite directions how to keep clear and distinct accounts, they will find the outline of an admirable specimen on pages 509, 510, and 511, of the last volume of Colman's European Agriculture, which we earnestly commend to their attention.

EXCELLENT ADVICE.—P. Barry very justly remarks, "Every man who sends an order for a dozen or half a dozen Dahlias, Roses, Fuchsias, Chrysanthemums, or any other genus, should say, "*Send me none but what are really distinct—obviously distinct.* I want not merely slight botanical distinctions, but such as will enable me to have *striking variations and contrasts in growth, foliage, and habit of plant, or in the size, form, and coloring of the flowers*"—a half dozen distinct, well marked sorts, going further than twenty scarcely distinguishable in shade or appearance.



Ketchum's Mowing Machine.

Above we give a cut of this machine, which is manufactured by Messrs. HOWARD & Co., of Buffalo. From all we hear of it, there appears to be no room for doubt as to its usefulness, or its ability to do all that is claimed for it. We think the proprietors would greatly promote their own interest, as well as that of the public, by making arrangements for its sale in this city. [See advertisement.]

The Economy of Evergreens.

We have long held the opinion that the character and morals of a rural community are necessarily improved by that most interesting of all kinds of rural embellishment, ornamental planting. But for those who cannot appreciate these advantages, we shall present another view of the subject,—the saving in dollars and cents. This the writer has had an opportunity of witnessing the present winter in his own case. Nine years ago, finding a serious inconvenience from the sweep of winter tempests, to which his residence was much exposed, a large portion of evergreens were mingled with the trees and shrubbery, then newly set out. About a dozen white pines, as many American Arborvitæ, and a few balsams, white spruce, Norway firs, and hemlocks, were placed, so far as practicable, on those sides of the house the most exposed, regard being had at the same time to the exclusion of uninteresting points of view.

One rule was adopted in removing the young evergreens, which were chiefly procured from the borders of woods, and which in some instances were brought twenty miles. This was, to take up enough earth on the roots, to preserve the tree upright against strong winds, after setting out. By this means, not one, out of some thirty or forty, was lost by removal. A white pine, then about three feet high and an inch in diameter, is now eighteen feet high, and six inches in diameter, and several others have made nearly an equal growth.

Now, for the *economy* of this plantation, which some of the neighbors thought was entirely useless labor. It has saved, the present winter, by the protection it affords against storms and wind, at least *ten dollars* in fire-wood, and this amount saved is increasing every year as the trees advance in growth. The cost of procuring and setting out the evergreens, is about *three dollars*. What farmer, who goes only for "utility," can show as large a per centage of profit in wheat raising or making pork? Whose children would be most likely to seek the tavern, grog-shop, and theatre,—those who enjoy a home made attractive and beautiful,—or those whose home is bald, bleak, and repulsive, from a total want of this cheapest and most natural of all means for its embellishment?

Transactions of the N. Y. State Ag. Soc. for 1850.

We intended to have given an earlier notice of this rich collection of agricultural matter, which in interest and value is fully equal, if it does not surpass any of its predecessors. The Agricultural Survey of Seneca County, by J. DELAFIELD, President of the Society, the leading production of the volume, cannot fail to yield much instruction to every reader, for, independently of the distinguished ability with which it is executed, that county, small as it is, furnishes specimens of the most important soils of Western New-York, namely, the gravel ridges of the northern portion, the strong wheat land of the centre, and the thinner soils of the Portage and Chemung formations. The county contains, besides, immense beds of peat and shell marl.

The Prize Essay on Agricultural Dynamics, by J. J. THOMAS, is worthy the study of every farmer. The loss of time and force, which the ignorance of a few general principles of the philosophy of mechanics and the failure to observe a few simple every day occurrences, causes the farmer, is an item of no small amount in a yearly balance sheet. It is due to Mr. THOMAS, to say that the engraver has made sad havoc with some of the figures illustrating its principles, and by which some portions of it are rendered perfectly unintelligible. We refer more particularly to the figure on page 651, where the *straight road*, instead of running over the top of the hill, is made to pass by its side, rendering the reccommendation of the author to pass round it, perfectly ridiculous. Also, on p. 632, the *beautiful curve* made by capillary attraction between two plates of glass, is represented like the wany edge of a slab; and on p. 702, the reader is presented with the preposterous exhibition of the course of smoke from a chimney directly in the face of a strong wind. For the sake of the reputation of the Society, corrections of these errors should be made in the next volume.

Among the lesser papers, the Report on the trial of Plows, the description of the remarkable farm of D. D. T. MORE, of Watervliet, and of the two excellent farms belonging to GEN. HARMON and E. M. BRADLEY, the valuable miscellaneous matter in the proceedings of the county societies, and in the numerous communications from various sources, and the analyses furnished by Dr. SALISBURY, are particularly interesting and important.

Cheap Draining.

It is stated in the foreign correspondence of the Michigan Farmer, that a method of cutting drains has been adopted in Scotland, requiring much less cost than formerly, being all done with the plow. It is very useful in all cases where the ground is clayey and tolerably free from stones. "In the first place, a common plow is passed back and forth, turning a furrow out on each side. Then follows the draining plow, which goes down from two to two and a half feet, the mould-board being so formed as to turn the earth all out. In this manner, twelve acres in the vicinity of Stirling were drained with three plows in one day, the tile being laid in the furrow just as the plow left it. The earth was returned to the ditch by means of a scraper, in the form of the letter V, the legs of course protruding forward, and a team attached to each leg, on each side of the ditch." We have been long since satisfied that the cost of excavating ditches might be much reduced by more horse labor than is generally used. For instance, let a large Michigan subsoil plow with ample team be set in a foot deep, a thing very easily done; by throwing a furrow each way (leaving but a narrow strip in the middle) the first foot of the ditch is at once thrown out with sufficient rapidity to prepare some miles for the spade in each day. By running twice each way, a greater depth and more perfect work might be attained. A regular and thorough system of draining is at present quite expensive, costing some twenty-five or thirty dollars per acre; and if its cost could be reduced one half by the application of horse power, it would greatly contribute towards its general introduction,—and be worth millions to the country, lying as it does, in most cases, at the very foundation of successful farming.

Rural Axioms.

It is as cheap to raise one ton of grass or clover, as a ton of burdocks or pig-weeds.

It costs no more to raise a hundred bushels of Baldwins than a hundred bushels of cider apples; or ten barrels of Virgalieus or Bartletts than the same quantity of choke pears.

An axe costing two dollars, with which a laborer may cut fifty cords a month, is a cheaper tool than an axe costing but one dollar, and with which he can cut only forty cords.

A "cheap-plow" at five dollars, costing in one season three dollars in repairs, and three more in lost time to teams, men, and by retarding crops, is a dearer plow than one at ten dollars requiring no repairs.

A cow bought for ten dollars, whose milk but just pays her keeping, affords less profit than one at thirty dollars, giving double the value of milk afforded by the former

A common dasher-churn at two dollars, used one hundred times a year, is not so economical a purchase, as a Kendall churn at four dollars, requiring but half the labor to work it.

A ten-acre field, costing fifty dollars per acre, and ditched, manured, and improved at fifty dollars more, so as to give double crops, is much more valuable and profitable than twenty acres unimproved, costing the same money.

The laborer who wastes half his strength in working all day with a dull saw, because he cannot give a shilling or afford half an hour to get it sharpened, will waste at least twenty-five cents per day, or $6 or $7 per month.

The man who loses half an hour of time, worth one shilling,—and wears his wagon and team equal to two shillings more, by going over a long and rough road, to avoid a plank-road toll of sixpence, loses just two and sixpence by the operation. This does not apply to the loaded wagon, where the loss is much greater from the smaller loads.

STATE FAIRS FOR 1852.—*New-York* at Utica, Sept. 7, 8, 9, and 10.——*Vermout*, at Rutland, Sept. 1, 2 and 3.——*Pennsylvania*, Oct. 20, 21 and 22, place not decided upon.

ANSWERS TO INQUIRIES.

C. F. BANCROFT, of East Calais, Vt., inquires—1. "When is the best time to graft?" Plums and cherries should be grafted very early, before the buds have *begun* to swell, usually before the frost is all out of the ground—apples and pears may be grafted either early or late, provided the inserted scions have not much swollen, but they make a better growth if it is done before the buds of the stock burst.

2. "When is the proper time to transplant wild blackberry and gooseberry bushes—how are they to be treated—and how far apart are they to be set?" They should be transplanted as early in spring as the frost and superabundant moisture are out of the soil, and before the leaves appear—they should be treated with the same care and skill that the best transplanted fruit tree receives—the distance may be three to five feet.

3. "Will apple seeds, kept frozen during the winter, and sown early in spring, grow as well as if sown the fall previous?" Quite as well, if kept in good condition, and sown before sprouting; and if the soil is heavy, they will do better, unless covered after autumn sowing with sand and muck to prevent the formation of a crust.

LIME-STONE FOR MANURE.—WM. C. HOFFMAN, of Frederick, Md., inquires whether "ground lime-stone will not answer the same purpose as burnt lime-stone." There has been a great deal of theoretical reasoning on the operation of lime, and very few rigidly accurate experiments; but it is obvious to every one that a thin coating of burnt lime applied to the soil, must in a few weeks at furthest receive again its full amount of carbonic acid—but as its efficacy is known to continue for years, it cannot be essential whether it be applied caustic or as a carbonate. Hence ground lime-stone would doubtless answer the same purpose as lime or marl. The only objection is its hardness, rendering difficult the process of grinding.

BREAKING OXEN.—A correspondent says, "Say to those about to break oxen, don't tie their tails together; I tried it twice, and in both instances had one of their tales pulled off shortly after yoking them, after which they sustained no further injury, though, as the sailor said, I sometimes found 'the starboard ox on the larboard side,' and the yoke turned. I do not believe in their breaking their necks."

J. H., Harrisburgh, Va. See Emery & Co.'s advertisement in this number, for answer to your inquiry.

PLANTERS.—W. C. S., Farrowsville, Va. We should recommend Bachelder's Planter for corn, on very stony land. The price, we believe, is $14. It may be procured of A. B. Allen & Co., New-York, or of Emery & Co., in this city. We know of no Illinois plow, to be had, either here or in New-York.

REAPERS.—D. Z., Youngstown, Pa. You can obtain Hussey's Reaping Machine by addressing O. Hussey, Baltimore, Md., and McCormick's by applying to C. H. McCormick, Chicago, Illinois.

N. Y. STATE AG. SOCIETY.—A bill, renewing the act of incorporation of this Society, has passed both branches of the Legislature.

NEW PUBLICATIONS.

NORTH AMERICAN SYLVA.—This work contains accurate descriptions and beautifully colored engravings of the forest trees of the United States, Canada and Nova Scotia. The elegant typography and binding of the volumes, make them an appropriate ornament to the parlor table. Every American must feel a sort of national pride in having always at hand, the dark, rich green foliage of the forests of his own country, and the directions for the cultivation and propagation of our native trees, give the work a positive value. The engravings and descriptions are from the original drawings and notes of MICHAUX and his son, who spent several years in exploring the forests of this country, in all their length and breadth. Subsequently the work has been prosecuted by the distinguished NUTTALL, and may now be considered quite complete. Published by R. P. SMITH, of Philadelphia, and G. P. PUTNAM of New-York, in six volumes. Price $45.

LITTELL'S LIVING AGE.—This periodical has so wide and well-earned a reputation, that nothing new can be said in its praise. It has maintained the same unwavering character amid the fluctuating spirit of the times, and constantly presents a true exponent of the current literature of the day. It contains elaborate articles for the profound, pleasing ones for the casual reader, and instruction every where. Published weekly, at Boston, Mass., by E. Little & Co.

THE INTERNATIONAL.—In the March number we find an account of those wonderful beings, the Aztec children—a beautifully illustrated description of Chatsworth, a moralised legend by the most unique and interesting of American story writers, NATHANIEL HAWTHORN; with the usual rich and entertaining miscellany.

HARPER'S.—The March number, opens with a new story by JACOB ABBOTT, which no one, who has ever read the productions of this attractive author, will fail to be interested in. "The recollections of St. Petersburgh" let us into some of the absurdities and peculiarities of Russian manners and society. "Personal sketches and reminiscences" of living authors, by MISS MITFORD, is an interesting article, from a work now in press by Harper & Brothers. A new novel by CHAS. DICKENS is announced for the April number.

ANALYSIS OF THE SWEET POTATO.—B. KIRTLAND gives in the Family Visitor, the following results of his analysis of the sweet potato:

In 119.5 grains of the ashes of the vines, and 104.07 grains of the ashes of the roots, there were,

	Vines.	Roots.
Sand and charcoal,	6.800	2.490
Sand and silica,	4.530	
Phosphate of protoxide of iron,	2.700	1.908
Phosphate of lime,	11.567	11.067
Phosphate of Magnesia,	6.133	4.493
Phosphate of potash,	53.067	46.720
Sulphuric acid,	2.766	1.903
Phosphoric acid,	1.498	8.272
Chlorine,	5.985	3.272
Carbonic acid,	24.091	23.820
	119.137	103.975

Horticultural Items.

Is the Fruit Market Overstocked?—Prof. Mapes says on this subject, in speaking of the better kinds of pears, "many bushels have been sold in the New-York market for $6 per bushel; and in Boston, where the ripening of pears in fruit rooms is better understood, many have been sold at $3 per dozen; nor does the supply as yet tend to reduce the prices." He adds "there are thousands of dollars worth of grapes sold annually by the Broadway fruit stores, at from *one to four dollars per pound*, and the finer kinds of pears at five to 25 cents a piece. Nor can they procure half a supply for the wealthy purchasers of such luxuries." Good fruit merely, may not sell high; but those at the summit of perfection, always. It is to be obtained not merely by procuring the best varieties, but more especially by high culture.

White Fruit and Birds.—The Gardener's Chronicle says that white fruit is not attractive to birds; that the White Tartarian is not subject to their depredations, while the Mayduke and other sorts are freely attacked. The birds in this country appear to be shrewder fellows, as *good* cherries, white or black, all become victims.

Grafting Grape Vines.—Keep the grafts in a cool, shady place, till the stocks you wish to graft begin to grow, and their leaves are as large as a shilling—then graft and you will be successful.

Peach Worm.—Boiling water, says the Horticulturist, is a most excellent application in the spring of the year, for diseased and feeble peach trees, and is a certain remedy for the peach worm. A correspondent very effectually excluded the peach worm, by digging a basin around the foot of the trunk, forming a cavity a foot in width and four inches deep, and then pouring into this basin very thick white-wash, made of fresh lime, and suffered to stand one day before applying.

Pears.—A. Johnson, jr., of Wiscasset, has a young orchard of dwarf standard pears, that is pears on quince, with short bare trunks about a foot and a half high, which is better than if clothed with limbs to the ground, on account of the weight of snow upon them in winter. A tree of the Winkfield, four years set out and nine feet high, bore a bushel, worth at least five dollars.

Apple-tree Borer.—At the Illinois Pomological Convention, last autumn, Dr. Kennicott recommended cutting the borer out the first year, and afterwards plugging them in with camphor, "which kills them to a certainty." C. Bryant thought the red-headed woodpecker a valuable aid in their extirpation, but this the Doctor thought was paying too high wages. The chairman, (J. H. Bryant,) thought there were two distinct varieties, one working in the root and the other the limbs.

The Bark-Louse.—At the same convention, the subject of the *bark-louse* on apple trees being under discussion, J. H. Bryant remarked that he had a tree badly affected, but by giving it rapid growth by cultivation, the bark-louse left. One orchadist had removed them completely by syringing the tree with strong ley, before vegetation started in spring.

Sweet Potatoes for the North.—D. F. Kinney, of Rock Island, in northern Illinois, states in the Prairie Farmer, that he failed in raising sweet potatoes until he procured a variety from Indiana called the Nansemond, an early variety, which he has cultivated for four years with great success. They are yellow, short, and mealy and sweet, and greatly superior in this respect to all the reds. Last year he sprouted sixty bushels of them, but was not able to supply the demand.

To kill Aphides in a Green-House.—The Gardener's Chronicle gives the following:—Take a sheet of touch paper, roll an once of tobacco in it, light it at both ends, put it in the house, leave it there, remain out-side with your hands in your pockets, and the job is done. "In the morning all the green flies will be dead."

Stealing from Gardens.—The author of "Rural Hours," after speaking of some well dressed girls, "elegantly flounced," &c., reaching their hands through the garden fence, and helping themselves to some of the finest and rarest flowers, just as if they had a right to them, asks the very pertinent question, "What would they have thought if some one had stepped up with a pair of scissors, and cut half a yard from the ribbon on their hats, merely because it was pretty, and one had a fancy to it?" Yet the flowers cost more time, labor, and money, and could not be so easily replaced.

Length of Fibrous Roots.—A correspondent of the Gardener's Chronicle examined a plant of mignonette, the roots of which had penetrated through several courses of bricks and descended into a cellar. Over the cellar was a brick pavement, between the joints of which the seed had been sown from year to year.

Beautiful Objects.—At the exhibition of the Cincinnati Horticultural Society, according to Dr. Warder's Review, some beautiful floral objects were presented. One was a Verbena (Defiance) trained up to a single stem 18 inches high, and then branched and drooping off gracefully so as to produce a very pretty effect. Another was a miniature arbor, perfectly covered with living plants, climbers, which being in full bloom, presented a fine appearance—"the rich blue, tender red, and pure white of the varieties of Maurandya, with other species, and the delicate foliage of the cypress vine intermingled, produced a very pretty effect." How incomparably superior are such objects as these, to those artificial monstrosities so commonly seen at exhibitions under the names of "floral designs" and "floral ornaments."

Horticultural Premiums.—The amount of premiums offered by the Massachusetts Horticultural Society, in the various departments, is as follows:—

Prospective prizes (for new variety of fruits, flowers, &c.)....	$750
For gardens, green-houses, &c.....	200
For fruits during the season.....	620
For plants, flowers, and designs,.....	700
For vegetables,.....	250

Such an amount, held up to the grasp of skilful culturists, cannot fail to bring out a rich display of interesting objects, and spectators as well as competitors who live within convenient access to such a society's exhibitions, possess privileges which must be very highly prized.

Guano.—It is said that the amount of guano annually used in Great Britain for the last five years, has cost two million pounds sterling, or about ten millions of dollars—more than equal yearly, to the cost of the Erie canal till its first completion. In addition, great quantities of lime, bones, shells, and immense piles of yard manure have been applied to the land.

The Princeton Pom. Convention---Western Apples.

An interesting convention of the fruit growers, chiefly of Illinois, was held the past autumn at Princeton in that State, at which some thirty or forty members enrolled their names, among whom we observe a number widely known as skilful cultivators. The proceedings occupy over a dozen columns in the Prairie Farmer.

The discussions were almost wholly confined to APPLES; and believing that the results of the deliberations in condensed form will prove interesting, more especially to our western readers, we give below a list of the fruits brought before the convention, and the characters awarded them for that region. The standard of the American Pomological Congress for designating grades of quality as *good*, *very good*, and *best*, was adopted.

Yellow June—good—the earliest, no other particular merit. The May apple of Carolina.

Early Harvest—very good north—but moderate bearer.

Carolina Red June—"very good, probably"—a great bearer every year, very profitable—rather acid, for market and cooking unexcelled—keeps long for an early apple—very handsome—tree ornamental, "finer than a rose-bush."

Early Sweet Bough.—Not recommended, being often very unproductive. On some high land north, has borne well—quality very good.

Sweet June—very good, profitable for general culture—the best early sweet apple of that region. Believed by some to be synonymous with High-top Sweeting of Massachusetts. [Hovey regards the latter the same as the Summer Sweet of Ohio.]

American Summer Pearmain.—"Best"—tree a feeble growth. Very productive, and of excellent quality.

Maiden's Blush—good; popular market fruit—first rate for cooking; recommended for general cultivation.

Hocking (a local name) resembling Rambour Franc, but believed by some to be different, was regarded by some of the members as very fine, productive, and profitable for market—one of the best late summer apples for the west.

Keswick Codlin—early fruit and early bearer, very productive, good for cooking only—worthy of limited cultivation for every man.

Early Pennock—good—very productive, worthy of general cultivation.

Fall Wine—very good—for very general cultivation.

Rambo—very good—best for general cultivation—unanimously recommended.

Vandevere—few if any superior, good bearer, rather subject to blight—worthy of general cultivation.

Yellow Bellflower—very good—some think "best." Highly commended.

Fulton—two members who knew it regarded it as "best."

Swaar—"best."

White Winter Permain—has been supposed the Michael Henry Pippin—but thought by a part of the members to be different—recommended for general cultivation.

Rawles' Janet—very good.

Newtown Pippin—appears from the discussion to be worthless north, fine, south.

Rhode Island Greening—fruit fine, large, fair—a scant bearer—not recommended.

Esopus Spitzenburgh—a few old and productive trees bearing fine crops, known by some members. Tree tender and very liable to blight.

Red Astrachan—very beautiful, rather acid for dessert, excellent for cooking.

Poughkeepsie Russet [English Russet of books]—recommended north for its productiveness; hot weather does not suit it.

Roxbury Russet.—A poor bearer with most members. bears well with others—does not keep in spring.

Baldwin—few had known it to bear well—occasionally affected by bitter rot.

Winesap—well spoken of for productiveness.

The following fruits were placed on the REJECTED LIST by the convention, which so far as they are known is very much in accordance with the opinions of intelligent cultivators in all parts of the country: Early Red Margaret, Carolina Sweet, President, Hoop's Apple, American Pippin, Jersey Black, White Pippin, Big Head, White Apple, Father Abraham, Dutch Codlin, Red and Green Sweet, Watson's Vandevere, King of the Pippins, French Pippin, Cathead, Sanders' June, Shaker's Yellow, Pennock, Pumpkin Sweet, Pound Sweet, Twenty Ounce Pippin, Lane's Redstreak, Capp's Seedling, Surprise, Victuals and Drink, Golden Ball, Clark's Greening, Cheeseboro' Russet, Sweet and Sour, Yard apple, Annette, Male Carle, Red Calville.

Cost of the Corn Crop in the West.

EDS. CULTIVATOR—In the February number of the Cultivator I see it stated, that the editor of the Prairie Farmer says he has made inquiry of several corn raisers in middle Illinois, of the absolute cost of this grain per bushel in the crib. Their estimate of the cost of raising, harvesting, &c., ranged from *four* to *six* cents per bushel.

To raise corn thus cheaply, the climate must be peculiarly adapted to its growth and maturity; the physical condition and texture of the soil must be such, as to admit of the most easy and cheap cultivation, by the use of the plow, harrow, &c. And the soil must *naturally* contain all those elementary constituents, in an available form, required for a healthy and vigorous growth of the plant.

With all the above named requisites and facilities of growing corn—it is still a mystery to many of our eastern farmers how the *thing* can be done. We have some *patches* of land, light, friable, and free from stumps and rocks, that can be plowed, planted, and cultivated as cheaply as the prairie. By the application of 30 or 40 loads of manure, we can grow from 60 to 80 bushels of corn per acre—now throw out of the account the cost of the manure and cartage, and then our corn would cost us several times the Illinois estimate per bushel. We hope some of the Illinois farmers will be good enough through the columns of the Cultivator, to enlighten us, by giving us the *items* of expense of cultivating an acre of corn, from the time they start the plow till the corn is cribbed. Such facts, might be of much practical use to the hard working farmers of the GRANITE STATE. *Warner, N. H., Feb.* 13, 1852.

VERMIN ON CATTLE.—The Maine Farmer says the best way to destroy these, is to reject all the troublesome ointments and washes, and apply tobacco smoke. He suggests a box, with a tube in each end; the burning tobacco being placed in the box, and the nose of a bellows applied to one tube, drives the smoke among the hair of the calf and wool of the sheep. Would not Brown's Fumigator, used for smoking the insects on plants, be a good thing for this purpose? And would not a covering of thin oil-cloth, over the animal's back, serve a good purpose in retaining the smoke? There are probably enough cigars whiffed in one of our large cities in one week, to suffocate all the lice on cattle in the United States.

Remarks on Some of the Farming in the Housatonic Valley.

ANALYTICAL LABORATORY, YALE COLLEGE,
New-Haven, Conn., Feb. 28, 1852.

EDS. CULTIVATOR—In carrying forward at the same time courses of lectures here and in Albany, I have had occasion, at least once a week, for the last two months, to pass through the valley of the Housatonic river for a part of its course. These have been flying railway visits, and moreover the ground has, for the most part, been constantly covered with snow. Such are not the most favorable circumstances for the inspection of an agricultural region, but I have nevertheless been able to note some points which I noticed the more, as they disclose a state of things which is not by any means confined to that section of New England.

Of the country through which runs the Housatonic road in the upper part of its course, I cannot say much; it is in the immediate vicinity of the road, from above Van Deusenville to North Canaan, rather flat, and having, I should judge, a somewhat light soil. Occasionally in this section I noticed fine barns, and outbuildings, with other evidences of thrift and good management. In a few cases too, large heaps of compost appear, sufficient to manure the fields very extensively and heavily. But it is not of this region that I intend to write.

Below Falls Village we come into a very rough and poor district, extending down through Cornwall and Kent, at least as far as New Milford, though I do not feel certain as to the boundaries of the towns. The land in the valleys, back from the stream of the Housatonic, may be better than that near the railway; of this I cannot decide, as I have not visited any points away from the line. Along the line, and in full view from the cars, may be, and I hope are, some good farms; as to this I would not pretend to speak with certainty; but I do feel quite sure that few *worse* specimens of winter management, can be presented, than some of those that I have witnessed this season in the Housatonic valley

In very numerous cases, and as it seems in some of the towns to a passer-by, almost a majority, the cattle of all kinds seem to spend their winter on a bleak exposed hillside, without the least protection; they may possibly be housed at night, or sheltered in some way, but their days they pass in the fields, and there they are fed. Scattered about the fields are small ill-shaped stacks, many times almost flat on the top, and universally without thatch of any kind, so far as can be seen. These stacks are surrounded by crooked rail fences, and the ground for many feet in every direction, is covered with hay trampled into the snow, it being fed upon the bare surface, without racks of any description. Several large circles of this kind may be seen in the same feed, denoting the consumption and the waste of an equal number of stacks.

The stacks are mostly built on sloping ground, quite convenient to some small stream where the cattle can drink, and into which all the soluble portion of the excrements, so plentifully deposited about the stacks, immediately runs. This arrangement in fact, is common to the yards in most cases. They are usually so located that all water and liquid drains away and is lost.

Now, I ask, could there well be devised a more wretched course of winter management than this? In the first place the animals are fed in cold bleak fields, on the snow. Their food is given so that a considerable portion is lost by being trampled under foot, and this food, from the manner in which it has been preserved, is probably not by any means of the very best quality. But this is still not the worst part of the case. It is well ascertained that the most uneconomical way of feeding stock is in the open air, at least so long as cold weather lasts. It has been found by actual and careful comparative experiments, that animals kept sheltered, and warm consumed less food, and really increased more in weight. The explanation is easy. The functions of respiration keep up the heat of the animal body; by the air of every breath we draw, we consume in the lungs and blood vessels, a portion of the food that has been taken into the stomach. Chemically speaking, the carbon of the food unites with the oxygen of the air, producing carbonic acid, which passes off into the atmosphere. It is this union of the carbon with oxygen, that is supposed to keep up the animal heat.

In cold weather we, as all know, require more food, and especially when much exposed to the air. Exercise and cold together very soon affect the system, if an abundance of food is not furnished. A man cannot endure cold and hunger long when they come together, but give him a full meal, and he will soon feel a glow over the whole system, caused by the new supply of what may in this case be termed fuel. The Esquimaux, and other nations living in extremely cold countries, eat eagerly enormous quantities of fat, tallow, and oil, without experiencing evil effects; these articles of food containing much carbon, are doubtless chiefly valuable to keep up their respiration, and through that the heat of the body.

If, after noticing such facts, we look at one of these unfortunate cattle shivering in a wintry blast, we see at once the reason why it eats so much more than if it were warm and sheltered, and at the same time does not increase greatly, or may even decrease in size. The greater part of the carbon in its food, which would otherwise go to the production of fat, is used up in maintaining the heat of its body, and consequently, with a large consumption, it even grows poorer. Surely, lumber is not dear in that part of Connecticut, and even cheap open sheds, fronting towards the south, with racks or boxes for feeding, would be a great improvement, and would, I have no doubt, turn out to be true economy.

In the second place, this arrangement is a miserable one, on account of the loss of manure. During the winter, if the farmers stock are placed in a yard well covered with straw, and peat also, if possible, and properly shaped, he accumulates a large quantity of valuable manure for his next crops. Here, however, the excrements of the animals are scattered about over the snow; when this melts, the greater portion of what is soluble, runs away with it over the frozen ground, while what remains lies, unless the ground is plowed, in lumps, and is comparatively useless. The land about the stacks is of course, somewhat benefitted, but not to nearly the same extent that it might have been, by the same manure properly preserved.

But perhaps some of your readers will say that it is

easier to find fault than to amend; that these farmers are poor; that their land is sterile, and thin; that it is full of stones, and only won by the hardest from the rugged hills.

These things are doubtless true, but they do not at all affect the necessity for a vital reform in the system at present pursued. They say—we cannot go to the expenses that are incurred by your rich farmers, amateurs and gentlemen; we know our business better than you can, and we have enough to do to live now, without trying your new fangled experiments, building sheds and barns, and being so mighty particular about a little manure. Such are the remarks that we hear from this class of farmers; they cannot and will not be taught.

Now, I would ask, why in the name of common sense, need these men pursue a system so opposite to their true interests? It is true, that their crops are thin and scanty, but is not that a cogent reason why they should be fed out again in the most economical and careful manner? It is true that their land is poor, and worn out, but is that a reason for letting what would enrich it, flow into the nearest brook? It is true that the man himself, is but just able to make both ends meet, but should he, for that reason, neglect everything calculated to better his condition, and to make his limited means go farther? It seems to me perfectly plain, that if ever man had need to study *true* economy, it is under such circumstances as those which exist in many parts of the Housatonic valley.

The more oppressive and marked their disadvantages, the more ought they to seek how they might best overcome them, and so increase their ability to make further improvements. It is not to be expected that they can do all things at once; can rectify errors and supply all deficiencies immediately; but they can begin and do something by the coming spring, if it is only to prevent the escape of some of the liquid from the barn-yard, or to prepare for forming a barn-yard, where they have none that can be properly so called. If they have no barn, and cannot afford one, they can put up a rough shed; if they cannot afford to hire extra labor, they can do a great deal themselves, at little unemployed intervals of time. All that is needed for the improvement of this valley, or any other like it, is a conviction that improvement is neceesary, and a determination that in some way it shall be accomplished.

I do not think that in these remarks I have done injustice, or exaggerated the condition of many farms to be seen in Cornwall, Kent, New-Milford, &c. Most of those to whom I have especially alluded, do not, I am quite certain, read the Cultivator, or any agricultural paper, and will, therefore, probably never know of my criticism on their system, or rather their utter want of any efficient system; I speak of them, therefore, for the warning of others. Yours respectfully, JOHN P. NORTON.

CARROTS FOR HORSES.—Horses that have a hard, dry cough, or that have the heaves, are remarkably relieved by moderate and regular feedings of carrots. A horse of our own, had once caught such a cold, that his cough might be heard half a mile; he was fed on carrots and green clover, kept sufficiently blanketed, never heated, and in six weeks was entirely well.

Dry Roads.

If the 170,000 farmers of the State of New-York, spend on an average but one month annually in driving teams upon the public highways, the yearly cost of teaming in the state amounts in the aggregate, at two dollars per day, to more than eight millions of dollars—equal to the original cost of the great Erie canal. Is not then, the improvement of our public roads, in order to lessen as much as practicable this enormous expense to the farmer, a matter well worthy of his careful attention?

At the present moment we wish to urge the general adoption of a single improvement, which appears to be but little known or appreciated, although where it has been reduced to practice, it has proved of great value. This is *thorough draining*,—not by the usual shallow, open ditches, from six inches to a foot deep, on each side of the road, and so far from the travelled track as to afford it very little relief from the surface water merely. But we mean *a first rate under-drain, directly beneath the track*, which will speedily carry off all the surplus water lodged both on and in the soil; and which, if made right, will be the means of reducing mud and mire to firmness and solidity in a wonderfully short period of time. A large size tile-drain is undoubtedly the best for this purpose; but where the tile cannot be had, quite as good a ditch, but costing a little more labor, may be made by filling in with stones, placing the smaller and flatter at the top, and then covering the whole with a close layer of hard-wood slabs or boards, before the inverted sods are laid on, and the earth filled in. The usual mode of forming a small under-ground channel, by placing a row of stones on each side at the bottom of the ditch, and covering this with broader stones, before filling in with the smaller, must not be forgotten or omitted where much water is likely to be drawn off. And where the bottom is sandy, a layer of flat stones or boards first placed upon the bottom to prevent the sinking of the stones, will save much trouble in future.

If the soil is clayey, or in any way not readily pervious to water, the stones should nearly fill the ditch before the slabs are laid on, even if tile be used, or else the drainage will not be speedy or perfect.

How to Skin a Calf.

My method is as follows, as I do as much of my work as I can myself, and in as short a time as possible: First, I secure the calf, as soon as the finishing stroke is given him, by means of a pin put in at the stalls over the small of his back, and thus keep him to the place till he has done stirring. Then having a horse ready harnessed, I rip the skin with a knife, and after removing the skin a little round the leg, strip it down with the force of my hand, completing it by driving my foot down between the separated skin and leg. Then first removing with the knife the inside corners of the skin, drive it down smartly as before. When the skin is removed in the same manner from the other leg, a small chain is secured to it, and to this the horse is fastened. The legs being then secured by means of another chain, the skin is at once stripped off by the horse. A skin thus taken is free from cuts. E. VAIL.

The Science of Agriculture.

The *art* of agriculture is pretty generally well understood in this country; probably, (considering all circumstanstances,) as well as in any other. Our farmers can all do *the work*, and do it well too. But the *science*, the theory of agriculture, is not so well understood. Agricultural science embraces a considerable number of other sciences. Indeed, it is a combination of sciences, for there are very few that do not enter into the practice of the farmer. He may not know it, but it is true, nevertheless. Let us enumerate them. The farmer should be a *chemist*, *mineralogist* and *geologist*, because he practices these sciences every day of his life, whether he knows it or not. He should be a *botanist*, for he practices it very largely; he should be a *physician*, for he has frequent occasions to resort to this science, in both man and beast; he should be an *entomologist*, for no class or profession has as much interest in this branch of knowledge as the farmer; he should be well versed in *natural history*, and he often is, without knowing a syllable of its theoretical principles; he should be an *astronomer*, and this too, he is, quite *too* often, ignorantly; he should be a *political economist*, for in him, at last, the public welfare takes refuge in all its troubles, and from him it derives all its strength—the enlightened farmers constitute the state. If agriculture be a science composed of nearly all other sciences, it is also an art composed of, or comprising nearly all other arts. The farmer ought to be, and frequently is a *blacksmith*; some of his family are *bakers* and *brewers*; he is a *carpenter*, a *machinist*, and quite frequently an *engineer*. Now if all this be true, what class of the human family require so general and so thorough an education as the farmer, to make them masters of their profession? It seems to the writer that the world acts most preposterously in bestowing a thorough liberal education upon those who are to practice a single simple science, and withholding it from him who is to practice all the sciences and all the arts. Farmers, themselves, are too apt to take the same course, by educating at a university one of their sons, who is destined to be a doctor or a lawyer, and contenting themselves with giving their other sons and daughters, who are to be farmers and farmer's wives, the simplest of a country school education. They would seem to reason somewhat like this —"Doctoring and lawyering comes from education, and farming by nature," a remark actually made to me by an old and respectable farmer. That even the *art* of farming is incapable of easy and quick acquirement, every farmer knows; but that the science, the theory of farming, as well as the handicraft, should be expected to be obtained more easily, and in less time, than those of the other professions, is, of all human errors, the most unaccountable. It is true, the boy raised upon a farm, and diligently performing the usual labors of a working farmer, will acquire the handicraft of the art by the time he is of lawful age, without the aid of *school* education—he may do so without being able to write his name. But then what sort of a farmer is he? A mere mechanical operator, who is obliged to follow the patterns and examples of his predecessors, being incapable of improving them in form or substance, not knowing anything of the *theory* of their operation, or upon what principles they may be changed for the better. The common blacksmith knows not why he blows the bellows—he only knows he increases the heat of his forge by it, but he knows not why; and so the merely practical farmer knows that by doing certain things he will produce certain results, if the season be propitious, because such things produced such effects in his predecessor's time, but he knows not why! If the blacksmith and the farmer knew all about the *theory* upon which their labors depended for their effects, how much more effectively, and with how much more certainty of results, would they not both labor? I have seen stable manure applied to land already too rich in such materials, and have heard wonder expressed because it did not produce results there equal to those it produced on land where it was wanted. I have seen lime applied to land wherein there was already a superabundance, and have seen it withheld when it was much wanted, all because the operators were unacquainted with the chemistry that properly belongs to their profession. Suppose the dairywoman knew the theory of the operation of churning, the philosophy, if you please, of the separation of the butter from the milk or cream, how many hours of hard labor would such knowledge not save her, and how much more butter would she not obtain from her milk. Even in the *kitchen* of every farm house, yes, every city dwelling house, there are numerous chemical operations constantly going on, which if properly understood, would result greatly to the advantage and comfort of all. The simple preparation of a cup of coffee, will depend for its result upon a chemical operation, and the beverage will be good or bad, according as it shall be prepared in accordance with correct chemical principles. Generally, cooks have made coffee so often under the instruction of others, that they know how to make it properly, but they have not the least idea of the philosophy of the work. The same may be said of all other operations in cooking. But the greater interests, such as making, saving, and applying manures; analyzing soils, selecting and applying renovators, (lime, &c.,) and *mixing soils*; these all require a knowledge of chemistry, theoretical and practical. There are but few farms that have not different qualities of soils, in different places, in excess. Here, a low, "*sour*" bottom; there, an arid sand hill; here, a dead clay, and by the side of that river a wide margin of black vegetable mold. How speedily would the truly scientific farmer commence carrying sand to the clay, and clay and sand to the vegetable mold, and the latter to all the others—and by thus mixing the various soils, render the whole fertile? If he be in doubt whether the soils of his various fields contain the necessary quantity of lime, how easily can he ascertain that fact, and if they do not, apply the proper quantity of this renovator. Possibly his soil is rich enough in vegetable organic matter—and if so, he ascertains the fact, and applies no more of that class of manures, but resorts to chemical renovators. And probably the reverse turns out to be the case—he has found lime and potash enough in the soil, and wants vegetable matter, and he applies it. In fine, a knowledge of chemistry, vegetable physiology, and a modicum of common sense, will enable him to ascertain what articles of manure his various fields require,

and thus avoid not only "carrying coals to New Castle," but paying dearly for them too. A general knowledge of chemistry and the kindred sciences, would also put an effectual stop to blindfold and costly experiments. It would also put a stop to universal agricultural panaceas. No body would then think of saying that common salt, soda, lime, anything, was an universal manure. They would then be all good only where and when they were wanted in a soil. But, says everybody, how can all this be done? How can everybody be educated and made scientific? I answer, by introducing scientific education into all the schools. How many a farmer's son is taught French, Latin, Greek, Mathematics, Algebra, and a dozen other subjects, not one of which will ever be a hundredth part as useful to him as chemistry and vegetable physiology would be. Enough of chemistry, and all the collateral sciences, should be, and can be, taught in plain English, in any country school, to make every farmer a truly scientific agriculturist, and it seems to me the legislatures of the states should take the matter in hand. In my opinion, there should be in every county of the state, schools expressly for this object, at which teachers should be prepared to teach these sciences in the common schools. GIDEON B. SMITH. *Baltimore, Feb.*, 1852.

The Influence of The Cultivator.

The following extracts, from a letter of a correspondent in Vermont, show in what spirit, and with what purpose a paper should be read:—

There are large numbers who are able, (who is not able to pay 75 cts?) to pay for an Agricultural Paper, and who ought to be better informed on this subject. The reply is frequently made, when asked to subscribe, "I don't think much of farming by rules, and some of those laid down I know wont do for me." No intellgent reader of your paper looks upon it as containing fixed rules that any farmer can follow implicitly with profit. Because a man near Boston can pick $60 worth of tomatoes in a day, a man in this section would be a fool to attempt to imitate him. Other cases equally plain might be mentioned.

Though I value very highly many of the experiments in, and modes of farming, yet it is not on this account alone, that I feel interested in the circulation of the Cultivator. A person who should read nothing in our leading political papers, but their strictly political articles, would read to little profit. These papers have become a kind of circulating family library, of a useful and entertaining character, and he must be an ignoramus, who does not learn from them something of the principles of philosophy, chemistry, geology, law and science, in all its branches. Nearly every week brings news from all parts of the globe, and a citizen of the United States must feel amply paid for a year's subscription each week, as he glances at the changes going on everywhere, and sees with pride, our republican institutions extending their influence, and crushing one despot after another—and our countrymen excelling in every branch of industry and skill.

It is in this light I look upon Agricultural Papers, which are conducted upon scientific principles. I have before observed, that I have not for several years received a single number of The Cultivator, for which I would not have readily paid its price for a single article. What a mighty sum that would be!—about six cents—a sum that would purchase two glasses of whiskey in your state, (it is more in Vermont I believe,) or it might pay two small papers of tobacco, or two segars!

The other day I took one of the back volumes, and read the article of a Southerner, asking what he should do with his seventy slaves, and twelve hundred acres of land. I consider the privilege of reading that article for the fourth time, as worth more than the cost of four numbers. It is candid, and well written, and shows the obstacles which lie in the way of emancipation. The reply of your Kinderhook correspondent is worth a whole volume of the Cultivator; yet neither of these articles are strictly agricultural.

There is your Hinsdale correspondent, who has as many *aliases* as BRISTOL BILL ever assumed. Why such a writer should resort to such expedients, I cannot conceive, but with all his attempts to conceal his real name, his character is well known, and his articles can easily be traced home. Prof. NORTON's articles are more properly scientific than agricultural, while Mr. HOLBROOK's partake more of the historical and biographical.

I do not know that I can show a single improvement on my farm, but that I can point to a number of the Cultivator and say, "*I got that there.*" But while I have been reading its agricultural matter, my attention has been called to other subjects directly or indirectly connected with it, that have been of more value to me than the cost of twenty volumes of the paper. Yours truly, JOHN S. PETTIBONE. *Manchester, Vt., Jan.* 1852.

We consider these remarks as remarkably just and appropriate. It is a striking feature of all true knowledge, that it is suggestive. One fact leads to inquiry, one truth reveals another, and a single idea conceived by a vigorous sound mind, paves the way for a series of discoveries almost astounding in their results. Thus it is, that improvement in any branch of industry, invariably leads to improvement in kindred branches, showing that the progressive tendency of the age is toward a higher standard. Though a man is usually estimated by his success in his own business, and a paper by the rank it holds among others of the same class, it would be an error to measure the influence of either, strictly by what has been accomplished in a particular sphere. Manly effort put forth in any one direction, tells on the elevation of the whole human race; and when, now and then, we hear the echoes of a long since uttered voice, coming back from the green hills of Vermont, we feel a sense of gratulation which spurs on to renewed exertion. EDS.

MAMMOTH STEERS.—The Granite Farmer says that the mammoth steers lately exhibited at Haymarket Square, Boston, weigh about 4,000 pounds each, and that the proprietor has been offered $15 per hundred for them for beef, which would be twelve hundred dollars for the pair. Dr. Crosby says, "While standing by one of them, our eyes came up to within four inches of the top of the shoulder, and to see upon his back we were obliged to mount a box." If the Doctor had given his own height, we should be able to judge of the height of the ox.

Notes of a Tour in France.

Eds. Cultivator—In accordance with your wish for some few agricultural notes of my last summer's tour in France, I send you the following desultory "jottings down," from my journal. They will be of interest, perhaps, to some of your readers, whose curiosity may have been excited regarding the country of the "French Merino" sheep—a breed that, within a few years, has occupied the attention of many of our flock-masters, and whose steadily increasing popularity, bids fair to give them a prominent place in the sheep husbandry of our country. My rambles this summer, were almost entirely confined to the department of the "Seine et Oire," (where the finest flocks of this breed are found,) my especial object in visiting France, being to select and send to this country the best sheep of that variety. Of my success, I leave others to judge; though without the cordial assistance and advice of one of the best breeders in France, I should scarcely have succeeded in meeting the approval of the critical judge in this country, for whom I acted.

On the — day of last April, I left the Havre and Paris railway at Poissy, and bidding good-bye to my traveling companions, who marveled much at my stopping when within an hour of the gay city of Paris, I entered a Cabaret, or small inn, to refresh the inner man before going further, and to procure a conveyance to Wideville, my destination for the night. Mine host, a round-faced portly individual, in white apron and cotton night-cap, (for he was cook as well as landlord,) received me as if I had been an old customer, and promising me horse, dinner, lodging, anything or everything I wanted, bustled off to his pots and pans with comic gravity. By the time the stout Norman stallion that was to take me on, had eaten his feed of oats, the dinner was placed on one of the numerous little tables that, covered with a coarse but snow-white cloth, always stand ready in the large "Salle a Manger," or eating-room. With the appetite of a man just from ship-board, I did ample justice to my stout host's cookery, and had just finished the bottle of light red wine, the invariable accompaniment of a French meal, when the cabriolet came to the door. This vehicle is the universal one-horse conveyance in the country, and resembles our old fashioned chaise. It is roomy and comfortable, holding three persons. The hood or top projects very far forward, and a wooden apron shutting up the front makes it almost close in bad weather. It is suspended on steel springs and is very heavy, though the large wheels diminish the draught; the rough pavements require a strong carriage, but the horses being all very powerful, its weight is of little consequence. Still our carriage makers would rather laugh at its ponderous appearance, and compared with our light wagons it would look very like a dray-horse by the side of a thoroughbred.

Leaving Poissy, we soon cleared the narrow crooked streets of the town, and once in the country, the sturdy black, incited by sundry applications of the whip, increased his pace, and striking into a good round ten mile an hour trot, kept it without flagging, up hill and down, all the way to Wideville about four leagues. These horses, though often rather sluggish, possess great wind and bottom. I had frequent occasion to remark this in those taken directly from the plow; after a hard day's work perhaps, they would go ten, twenty, or even thirty miles, without sign of fatigue. The general character and appearance of the Norman horse is too well known to need any particular description. Strength and endurance are their distinguishing features, to which, surprising as it may seem, is generally joined docility. My friend's wife Mad. G——, drove either of his two cabriolet horses with perfect safety. They often reach a great age, and retain all their good qualities to the last. I have seen twenty year old horses working as cheerfully as colts. The farmers generally use stallions in their teams, the mares being chiefly kept by the breeders. There are several horse fairs in this part of France; one of the most considerable is at Chartres; it is held once a year, and there are sometimes a thousand horses on the ground for sale. The most esteemed variety is the "Percheron," so named from the locality where they are bred. At three or four years old they sell for from one to two hundred dollars, and even higher, according to size and action, and are much sought after by the richer farmers and proprietors as cabriolet horses. A young grey of this breed in the stable of a friend with whom I stayed, at St. Escoville, struck me as a noble specimen. He stood 16 hands high and well spread. His powerful counter, short back, strong loin and bony limbs denoted great strength and constitution, and his broad forehead and intelligent eye, spoke well for his temper and sagacity. Nor was I deceived, when the next morning, being late in starting for the rail, he took two of us in the heavy cabriolet over a hilly wood to Estampes, a distance of 14 miles, in less than an hour, without effort or fatigue, though apparently his condition was much too high for such a drive. They are generally good feeders and easily kept fat. I think that a cross of this breed on our common stock, might improve the size and substance without injuring the activity and spirit that characterises the American horse. For our use it would be far more valuable than a cross with the English dray horse, whose only recommendation is his prodigious power, his best pace being a walk. The Canadian horse still bears a resemblance to the parent stock, though with less size and style, as would of course follow from crossing with the small Indian race. The "*Morgan*" horse has been said to have a strain of this French blood, and their appearance and performance would certainly warrant the opinion. If such be the case, no better argument for the cross could be found.

Our road now lay through a rolling, cultivated country, dotted with small hamlets, and patches of wood. The forests of St. Germain and Marly bounded the view to the east, but westward, the eye ranged far over the fertile valley of the Seine. These forests were once much more extensive, and belonged to the Crown, by whom they were carefully preserved for the purposes of the chase. But during the various revolutions that have shaken France, they have been on various pretexts reduced in size and number. The land has been cleared, and let or sold. The high walls that enclosed them have been suffered to fall into decay, and sheep and cattle quietly graze, where once the stag and the wild boar were the

only occupants. Some of the best farms in this part of the country, are on the sites of these old forests. They are traversed in all directions by roads and paths, constructed in olden times for the convenience of the king and court when hunting, but now overgrown and neglected, they are only used by the wood-cutter or charcoal-burner.

The first thing in a French landscape, that strikes an American, is the absence of fences, or visible divisions of any kind; and yet the land is often held in small parcels. The usual mark is a stone set in the ground at a corner; often it is little more than laid on the surface; nevertheless, quarrels and litigation arising out of *boundary* questions, are very rare. The sub-division of land is most general near the villages, and in their neighborhood the pieces are often very small. It is the custom, when a man dies and leaves land, (no matter how little it may be,) for his heirs to divide it, and each one hold his portion. On the death of one of these it is again divided, and so on until accident or necessity, throws it into the hands of some large land-holder. There seems to be but two classes of proprietors in this part of France. The one holding large estates, the other mere patches of ground There are few *small* farms either owned or rented. Most of the land is rented in bodies of from five hundred to a thousand acres. The rate depends of course upon the quality, &c., varying from five to ten dollars an acre. The large tenant farmers reside on their farms; but the peasantry, or working classes, live in hamlets or villages, as is the case in most parts of Europe. Hence it is, that around them the land is so divided. The small lots are usually in the shape of long parallellograms, and with their various colored crops, look at a distance, like a huge patch-work carpet. The women do most of the labor on these little patches, whilst the men are occupied with other work. The cultivation is generally rude; the people are ignorant and wedded to old customs, and the land cropped to death! Spade husbandry is the most common, and I was told the crops were very light, probably for want of manure. The poor people try to remedy this want by turning under a green crop, and sometimes with success.

The roads are excellent, and are kept in order by government. They are divided into sections of a few miles, to each of which a man is appointed, whose sole duty it is to repair the road. There are two kinds of road in France. The old road, with a strip of pavement about five yards wide through the middle, and a good gravel track on one or both sides. This was the ancient post route, and the principal thoroughfares were constructed in this way. When new, it is excellent, but the blocks of stone are large, and soon become uneven, when it is very uncomfortable to travel over. The new roads are MacAdamized, and are equalled by none I have ever seen.

In this department, as well as in many other parts of France, they are bordered with fruit trees, generally apples and pears. The latter were in full bloom, and promised an abundant crop of fruit. It is, however, very poor, being only fit to make cider or perry. "Cider," as *they* call it, is made indiscriminately of both apples and pears, and is the common *drink* of the country, at least of this part, where the vine is not cultivated. Very little attention is paid to making it, as it is only used by the lower classes. The fruit is neither ground nor pressed, only steeped in water; and as might be expected, the beverage is very insipid, and I should say, from its taste, has no intoxicating quantities.

As we drove along, I remarked how very few cattle or sheep were in the fields, and those few always accompanied by a shepherd or cowherd, to keep them from trespassing. The cows are sometimes tethered by a rope round the horns, fastened to a pin driven into the ground, and I observed that they always eat up, without trampling down or wasting, all within their reach; they were usually tethered on clover or lucerne. We passed at a distance, the Agricultural School of Grignon, one of the best government establishments of the sort in France, to which I afterwards paid a visit. Here, leaving the paved road, we turned into a cross road, which soon brought us to the gates of the park, within which, and close to the old Chateau of Wideville, my friend Mr. E. resides. He, himself was, not at home; but I was received with true French hospitality by his family, and at once took up my abode here for several days. F. M. R.

Morris, Feb., 1852.

Mulching Potatoes.

For the purpose of directing attention to the subject in season, and inducing the trial of experiments, we give the substance of a mode of raising potatoes described in the Plough, Loom and Anvil, as performed by three different farmers, by mulching copiously with straw. The land, prepared as usual, was laid off in rows two feet apart, manured in the furrows; the potatoes dropped and covered as usual, leaving a level surface, and straw then applied six inches deep. The straw kept the surface moist and mellow throughout a prolonged drouth, and the crop was 300 bushels per acre, the tubers being of the finest quality, although potatoes were generally nearly destroyed by rot. "What struck us as a peculiarity," says the editor, "was their singular smoothness, being quite as much so as apples. Mr. Somers laid his potato cuttings upon unplowed, unprepared ground, merely covering them with straw, and his crop we are informed, was fully equal to Mr. Skinner's."

A new Mode of Fence Building.

EDS. CULTIVATOR—Being desirous to add my mite for the benefit of my brother farmers, I describe my mode of fence building. In the first place I set a good post seven feet four inches in length, two feet four inches into the ground, leaving five feet above ground. I then drive a stake beside the post at sufficient distance to admit a rail, then lay in two rails. I now twist a wire firmly around the post and stake, then put in two more rails, then another wire, completing the fence with two additional rails, making six in all. I take the precaution to sharpen my posts, as they take their places more readily when thrown by the frost. I have had this fence standing on my farm for four years, and it proves to be cheap and substantial. My neighbors have also tried it and found it in all respects satisfactory. A. BALEY. *Burnt Hills, Saratoga, N. Y.*

The Ice Trade.

EDITORS CULTIVATOR—A view of the methods of cutting and storing ice, in the vicinity of Boston, and of placing it in vessels for exportation to distant ports, is well worth a journey of one hundred miles. I spent a day of the very fine weather of the first week in February, at Fresh Pond, Cambridge, near Boston, observing the processes of the ice business, and learning its statistics and capacity as a branch of commerce. It is a large, and emphatically a *brilliant* business. A substance so perishable, and ordinarily so valueless as ice, becoming an article of profitable exportation to the principal ports in warm climates, often in its voyages twice crossing the Equator; the numbers of men and horses engaged in securing ice, all putting forth their utmost activity; the long trains of the railroads, employed in transporting it to the wharves for shipment; the number and variety of vessels in the harbor receiving or preparing to receive their ice cargoes,—all conspire to impress the reflecting observer with wonder and enthusiasm.

Frederic Tudor, Esq., of Boston, is distinguished as the original projector of the ice trade of the United States. In 1805, at the early age of twenty-two years, Mr. Tudor conceived the idea of making ice an article of commerce, and forthwith commenced arrangements for taking a cargo to the West Indies. His enterprise found little favor with others, and no one being willing to receive so novel a freight on shipboard, he purchased the brig Favorite, of 130 tons, loaded her at Gray's wharf, in Charlestown, with ice cut in Linn, now Saugus, about seven miles distant from the wharf. The Favorite sailed on the 13th of February, 1806, with Mr. Tudor on board, arriving at St. Pierre, Martinique, in twenty days, with her cargo in perfect condition. The experiment resulted in a loss of about $2,700; but Mr. Tudor being naturally inclined to far-reaching views and plans, and to an energy and decision of purpose not to be baffled by the obstacles it met, made other shipments with various success, until the embargo and war of 1812 put an end to his business. After the war closed, in 1815, he negotiated a contract with the government of Cuba, under which a good ice business was pursued at Havana. Shipments were made to other ports in the West Indies, in some cases attended with profit, and in others with loss. In 1817, he extended the trade to Charleston, S. C.; in 1818, to Savannah, Ga.; and to New Orleans in 1820.

The shipments of ice to ports coastwise and in the West Indies, slowly but steadily increased, and in the year 1833, Mr. Tudor succeeded in extending the business to the East Indies, by safely landing a cargo at Calcutta. He afterwards shipped ice to Bombay, Madras, and to various ports in India and China, and fully demonstrated that this perishable article could be made to pass a voyage of five months, through various climates, crossing the equator twice, landing safely at its destined port, and might there be preserved throughout the year.

Up to the year 1832, the ice trade had been mostly conducted by its original projector, the total amount of the shipments that year being something over 4,000 tons of ice, all of which was taken from Fresh Pond. Many perplexities, discouragements, and heavy expenses were experienced in placing the business upon a permanent footing. The implements and machines for cutting and preparing ice for storage and shipment, for hoisting it into the ice-houses, or on board ship, must be invented, and afterwards improved, or thrown aside for such others as increasing experience determined to be better; ice-houses, at home and abroad, must be built, and the mode of construction best calculated to preserve the ice, could be determined only by expensive experiment; the cheapest and best mode of transporting ice from the ponds or ice-houses to the ships, and from them, when arriveda to the destined port, to proper storage again, must be ascertained; the preparation of vessels for receiving and preserving cargoes during long voyages through warm climates, was the subject of many experiments, involving great expense; and added to the rest, the owners of vessels objected to a freight of ice, under an impression that it would injure their vessels, and hazard the safety of voyages. Notwithstanding these discouragements, and the many early disasters to which Mr. Tudor was subjected, he persevered in his operations, has continued in the trade up to the present time, and now, forty-six years after his first voyage to Martinique, is considered one of the rich men of his native town.

The difficulties experienced in the early operations of the ice trade, are now in a good degree overcome; its methods are highly excellent; more ice is now taken in one favorable day than in 1832 would have been necessary to supply the whole trade; many enterprising parties are now engaged in the business; it has more than doubled in importance within the six years last past; and notwithstanding it has now reached a yearly exportation tion of 100,000 tons, Mr. Tudor and others consider it as yet in infancy, capable of great enlargement. The quantity of ice used in old markets is steadily increasing, and new markets are constantly opening to receive it. Its use in New-Orleans has grown from 300 tons in 1820, to 30,000 tons in 1851,—or to nearly one-third of the whole shipment from Boston. Fresh and Spy Ponds for many years supplied all the ice the trade wanted; but within the past few years, operations have been extended to a dozen or more ponds not far from Boston, and ice houses have been erected on their shores, of a capacity, in the aggregate, for storing a great quantity of ice. Gentlemen engaged in the trade are of opinion that in a few years more, the product of nearly all the waters around Boston will be required, to supply the demand.

The shipments of Ice from Boston, coastwise and to foreign ports, during the year 1851, were as follows:

	Tons.		Tons.
East Indies,	11,508	Trinidad,	265
London,	531	Matanzas,	492
Liverpool,	816	Porto Rico,	1,175
Rio Janeiro,	2,182½	Demarara,	630
Kingston,	1,782	Chagres,	191
St. Thomas,	1,144	Nassau,	300
Gibraltar,	476	Vera Cruz	100
Alexandria, Egypt,	373	Fayal,	11
Marseilles,	115½	San Juan,	15
Cape Town,	350	Provinces,	18
Barbadoes,	702½	Porto Cabello,	35
Pernambuco,	189	San Francisco,	987
Sisal,	350	Southern Ports,	68,361½
St. Vincents,	353		
Havana,	5,520	Total,	99,578
St. Jago,	605		

Ice used in Boston and vicinity, in 1851, about, ... 30,000

Thus the ice trade has succeeded in converting a rapidly wasting, and ordinarily valueless substance, into a production of large commercial importance, affording a handsome return to the parties engaged in its prosecution. It furnishes inhabitants of countries contiguous to the equator, with a grateful, and now indispensable luxury, both in sickness and health. It has thereby signally and powerfully promoted temperance in the use of strong drinks; for before its extension to those countries, their insipid waters were rarely used as a beverage, strong drinks being a universal substitute; now, iced-water is the most grateful beverage, and is freely used. Day laborers and teamsters with their horses, find employment in cutting and storing ice, at a dull season, when they most need work, from which they annually realise as much as $100,000. Ship owners now derive from the trade at least $200,000 each year. The State of Maine furnishes the saw-dust used in preparing vessels to receive ice, and in packing it, from which her people receive annually $15,000; and she also furnishes lumber for the same purpose, for which they get $15,000. Railroads earn from the transport of ice some $50,000. The traders to India and China get about $35,000. Machinists and blacksmiths receive $2,000 per annum, and the tax-gatherer comes in for his share. Orchardists now transport fruits to India in ice, which they once could not do, and from which they derive 10 to $15,000 each year. Perishable vegetables are sent in great variety to

India on ice, from which a profit is realized. Live animals, for the supply of fresh provisions, are no longer carried to sea in coops and stalls, but dead; they go in ice. It is said that the India trade is greatly enlarged at Boston, and that the ice business has secured the result; that a majority of the vessels bearing India cargoes are sent to Boston, because her ice affords a return freight.

Visiting Fresh Pond, to view the operations of cutting and storing ice, I found that the parties engaged in the trade, had each a given surface, or "privelege," to work upon, accurately laid out by metes and bounds, and described by deeds in writing, and that those boundary lines are exactly observed. I was first introduced to Mr. Tudor, from whom I derived much information, and various statistics relative to the business. I next met N. J. Wyeth, Esq., and had the pleasure of some conversation with him; but finding him much occupied, and that he had already been actively engaged four successive days and nights in securing his crop of ice, without sleep during the time, I did not choose to tax him further. Mr. Wyeth has distinguished himself by the use of steam power in elevating ice from the pond to the receiving doors of his ice-houses, and in dressing the blocks of ice to accurate shape and dimensions, for packing. He has also constructed massive ice-houses of brick, the walls of which are four feet thick from outside to inside, inclosing two sets of air spaces. They are costly, but have the advantage of durability. Mr. Wyeth has been a distinguished adventurer, has twice crossed the Rocky Mountains to Oregon, made investments there, is evidently a man of varied knowledge and superior abilities, and great energy of purpose.

Passing on, to the works of Messrs. Gage, Hittinger & Co., I found Mr. Hittinger very polite, and ready to show me everything, He had filled all his ice-houses at Fresh Pond, which hold 40,000 tons, and was then finishing a stack of ice, of 20,000 tons. He explained to me the various operations of cutting and housing the ice, which I will attempt to describe, though a description is not easily given, by a novice.

When ice has formed of sufficient thickness for cutting and storing, the first operation is to remove the snow, if any there be covering the ice, which is done by light wooden scrapers, managed by one man and one horse. If then a surface of snow-ice, or ice formed of snow and water, presents itself, it is removed, not being deemed ed valuable. It is separated from the clear blue ice by the "ice-plane," a machine drawn by two horses, and which shaves two inches deep and twenty-two inches wide, at a time, having guides to it which run in grooves previously made in the ice by the "ice-cutter." The chips made by the ice-plane, are removed in the same way that snow is. All things being now ready for taking the clear blue ice, the first thing done is to get a straight line the whole length of the body of ice to be cut, which is accomplished by setting a stake at one corner of it, and starting from its opposite corner, with a long straight-edged board and a hand ice-marker, the operator places the edge of his board in a range with his starting point and stake, makes a grove in the ice the length of the board, then moves it along its length towards the stake again, places it in range and continues the grove, and so on, till the whole line is obtained. It is imnortant that this line should be straight, as the regularity of all the cakes of ice to be cut is governed by it; and if they are not of uniform size, they will not pack properly in the houses. This grove is then deepened by a marker drawn by one horse. Then follows the "ice-cutter," a machine something in the form of a boy's sled, made wholly of iron and steel, its runners being a series of steel cutting chisels, making grooves two inches deep at a time, and twenty-two inches apart, one runner going in the groove previously made, and the other making a new groove. The cutter is passed back and forth until the whole body of ice to be secured is grooved into strips twenty-two inches wide, and of about two-thirds the depth of the ice, and then the same operation is performed at right angles to these groves, checking the ice off into blocks twenty-two inches wide, each way.

The ice is now to be separated from the main body, and conducted to the houses for storage. The outer grooves, on one end and one side of the body of ice thus prepared, are opened clear down, by an ice-saw worked by one man, and another man with a sharp blade or chisel, about one-third the size of a shovel blade, and having a long handle, presses his instrument into every third groove, each way, so that blocks of ice five and a half feet wide, each way, are readily separated from the main body. These larger blocks contain three grooves, each way, and nine smaller blocks, twenty-two inches wide each way. Blocks are taken from the main body of this size, because it is a convenient size to float to the shore, and just about right in weight for one horse to elevate upon an inclined plane from the water to the reception platform beside the ice-house. The blocks are conducted by men with hand spikes to the shore alongside the ice-houses, through channels of water kept open for the purpose. They are then one at a time elevated by horse power to the reception doors of the houses, where men are ready to take them, and pass them along on wooden rails to their places in the house, where by striking a chisel lightly into the grooves, they instantly separate into nine blocks each, of twenty-two inches wide, and of such thickness or depth as the ice may have formed. Mr. Hittinger remarked to me that a formation of ice thirteen inches in depth is, on the whole, most desirable and easiest managed. These smaller blocks are laid up in regular courses, so that when the house is filled, the ice is almost as solid and regular as masonry.

The tools used in this business are its own; peculiar and beautiful. They are of great variety; many of them are costly, but very effective The "ice-cutter," alone, is considered as of the annual value, to the ice-cutting business of the northern United States, of twenty thousand dollars. It has spread abroad into several states, and has even gone to Russia.

The ice-houses which I saw at Fresh Pond, are built above ground, and as near the margin of the pond, as circumstances allow. Messrs. Gage, Hittinger & Co.'s houses are built of wood. They are 90 feet long, by 32 feet wide, and twenty foot posts. They take 45 blocks of ice lengthwise, and 16 blocks widthwise,—the number of tiers in height being governed by the thickness the ice in different seasons may have formed. They have double walls, formed by framing two ranges of joists upright, into plates at the top, and sills at the bottom. The outer range of joists is boarded up on the inside, and the inner range on the outside, leaving a clear space between the two boardings, of two feet in width. This space is filled with spent tan-bank, well trodden down. Once in about every five feet in perpendicular height of the two ranges of joists, they are confined together, by iron straps, to prevent the sides of the house from warping out of shape.

The roofs are of rafters and shingles, in the usual manner of building. The bottoms of the ice-houses are of earth, over which wood-shavings are placed previous to getting in ice. When the houses are full, the ice is covered about ten inches deep with dry shavings. In the southern latitudes to which ice is sent, the houses are expensively built, usually of stone or brick, with double walls, containing either double air-spaces, or spaces filled with light, dry vegetable matter. Their excessive cost is quite a hindrance to the enlargement of the trade; and if this could be modified, the business would advance more rapidly. Mr. Tudor has alone, $100,000 invested in these buildings in New-Orleans.

Mr. Hittinger informed me, that when the weather is good, and the business is in full blast, he can employ 250 men, and 70 to 100 horses, in the various methods of securing ice; and that on such occasions, from 2 to 3,000 tons of ice are housed in one day, at an expense varying all the way from 10 to 50 cents per ton, the cost depending upon circumstances, favorable or otherwise. While I was reviewing his operations, 30 cars, holding in all, 240 tons of ice, were loaded in three quarters of an hour, or at the rate of a car in a minute and a half. The ice was taken to the wharf in Charlestown, to fill a vessel then loading. Five horses, each taking a block 5½ feet wide each way, and following each other in quick succession, drew the ice from the pond, up an inclined plane,

to a platform level with the floor of the car; in an instant the block was separated into nine blocks twenty-two inches wide, which were loaded by hand into the car. The workmen acquire great dexterity in handling, packing or loading ice, and are accustomed to the exertion of their utmost activity; but it was a wonder to me in this instance, how they got through with the loading process, without broken bones. While cutting and securing ice, as many vessels are loaded as can be, because once handling of the ice is saved. A railroad track is so laid as to accommodate the business, and one engine draws a very long train at a trip.

The vessels for receiving and transporting ice, are prepared with a thoroughness proportioned to the length of voyage, and time of accomplishing it. For a voyage to Calcutta, the ice-house of the vessel has first a floor of boards, then shavings, next saw-dust, and then shavings again, in all two feet in thickness. The sides of the house are so boarded as to give a space of some eighteen inches between the boarding and the sides of the vessel, which space is filled with dry saw-dust. packed in as solid as possible. The ends of the house are double boarded, with a like space for saw-dust. The ice is covered over with dry shavings. The water formed by the melting of the ice, leaches through the bottom of the house into a well-room, and is daily pumped out during the voyage. For New-Orleans and the West-Indies, the preparation of vessels is less thorough.

Some years, the winters in the immediate vicinity of Boston are feeble, and parties engaged in the trade find it necessary to seek more shallow waters, or to go up the railroads westward, to ponds away from the tempering of the cold by the impulse of the sea. To meet this difficulty, Mr. Tudor is now making an artificial pond, in a low meadow on his farm, on the shores of Fresh Pond. It was last fall completed to the extent of four acres of surface, and the work is to proceed forthwith when the season will allow. It is to be four feet deep, to cover 20 or 25 acres of ground, and to be fed with pure, fine water from the overflow of Fresh Pond. It is estimated that its construction will cost something below one thousand dollars per acre. Its superior excellence in producing early ice, has been proved this season, by its showing an ice-surface early in December, six inches thick, while the deep pond bordering on it, was without any ice.

Calling at the counting-room of Messrs. Gage, Hittinger & Co., in Boston, some conversation was had as to the best construction of ice-houses for private families in the country. Mr. Gage remarked, that an ice-house built below the surface of the ground, under a carriage-house, wood-shed or barn, would best preserve ice, such a covering being a good protection from the excessive heat of mid-summer; the cheapest walls for the house, in the long run, would be those made of stone, laid in cement; that if walls are to be made of a frame work of timber and boards, there should be a foot of space all round between the sides of the house and the earth-sides, to be filled up solid with tan-bark—that being a non-conductor, and tending greatly to protect the ice from the warmth of the ground; that a layer of wood shavings should be spread over the bottom before putting in ice; that the ice should be closely packed, and when all in, should be covered about ten inches thick with dry clean shavings, such thickness being better than more, because if too thick a covering is put over the ice, the vapor arising will be confined, and heat will thus be generated; and that straw is not a very good covering for ice, because it soaks and fills with moisture, and then lies compactly and heavily upon the ice, thus creating too much heat. Reckoning the expenses of constructing family ice-houses, of repairing them from time to time, and of annually filling them, the yearly cost to a family of the luxury of ice will not fall much under ten dollars. In large villages, where a good deal of ice is wanted, families might consent to be supplied, daily, semi-weekly, or weekly, with a given amount of ice, at a stated price by the year, or otherwise. An enterprising individual, or a company, in a village, might erect an ice-house of suitable size for supplying the demand, locating it in a convenient spot contiguous to waters producing fine ice, and do a profitable business at furnishing the inhabitants with ice, at less than half what it costs where individuals separately lay in a yearly stock of it. F. Holbrook. *Brattleboro', Feb.* 10, 1852.

Amount of Cheese per Cow.

Eds Cultivator—In the February number of the Cultivator, under the head "Stock for the Dairy," I find some valuable suggestions upon the best mode of managing a dairy. It appears from the census of 1845, that "the greatest quantity of cheese per cow, returned from any one county, was 226 pounds, from Herkimer; also from the township of Fairfield in the same county, 350 pounds of cheese were returned per cow."

I wish to make a statement through your colums, of the amount of cheese made per cow, from some of the dairies in the town of Newport in the county of Herkimer. James Keith keeps a dairy of thirty-one cows; and in 1850, made 20,000 pounds of cheese. He also sold one firkin of butter, besides furnishing milk, butter and cheese for a family of nine persons. The cows had a little extra feed in the spring of the year. This will give about 650 pounds per cow. Nicholas Smith made from 20 cows, a fraction over 12,000 pounds, extra feed in the spring of the year. Alpheus Spencer in 1851, made from 53 cows, 27,000 pounds of cheese, besides a couple of firkins of butter. John A. Fenner in 1850, from thirty cows, made 15,600 pounds of cheese, besides furnishing milk, butter and cheese for nine persons. There are numbers more of dairies which would compare very nearly with the above. I think the average yield per cow in the town, would be about 400 pounds. S. F. *Newport, Herkimer county, N. Y.*

A few Facts from the Horticulturist.

From a late number of this admirable Magazine, we extract the following, well worthy of notice:

Select Strawberries.—The best five for family use are, Large Early Scarlet, Burr's New Pine, Hovey's Seedling, Hudson and Crimson Cone.

Lawns.—Red top or blue grass, mixed with white clover, make the best lawns; three-fourths of either of the former, and one-fourth of the latter—sown three times as thick as usual, early in spring, on dry mellow ground, rolled perfectly smooth.

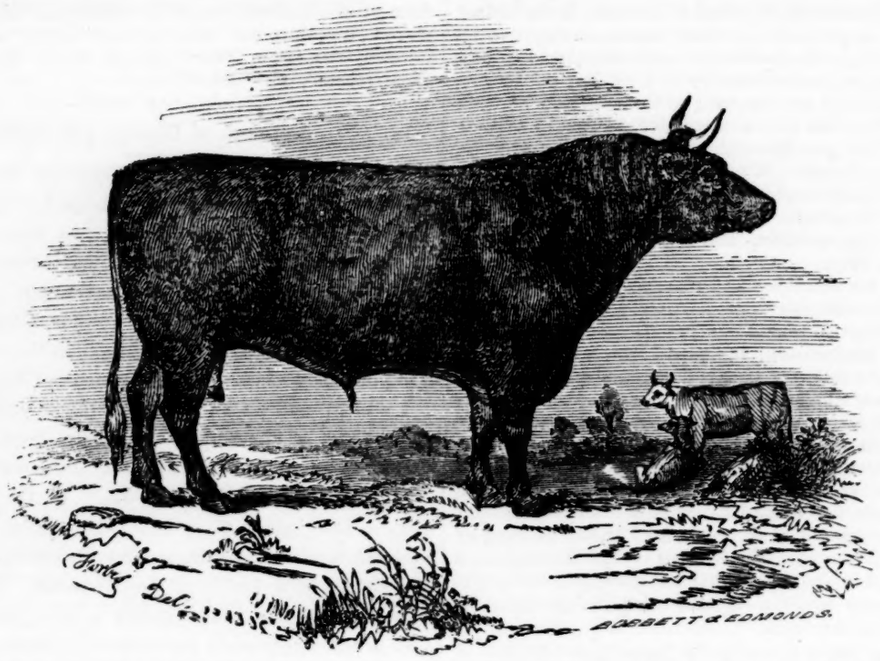
The Monarch Pear.—This, with others of the best of Knight's celebrated pears, is put down as second rate, and some of them far below that.

Magnolias.—The only one hardy enough for Maine is the Cucumber tree, *M. acuminata. Conspicua* and Soulangiana, have borne 20 degrees below zero, on the Hudson.

Roses.—The 12 following everblooming hardy roses are recommended as best: *Hybrid Perpetuals*—Madame Laffay, Giant of Battles, Baron Prevost, William Jesse, La Reine, Duchess of Sutherland, Aubernon; *Bourbons*—Madame Desprez, Bouquet de Flore, Souvenir de Malmaison, Pierre de St. Cyr, Mrs. Bosanquet.

The best hardy climbing roses, for "the most northern states,"—Boursalt Elegans, Queen of Prairies, Baltimore Belle, Superba, Eva, Corinne.

Profits of Fruit.—"We could point to 10 acres of ground," says the Editor, "from which a larger income has been produced, than from any farm of 500 acres in the country." It may be well to add, that this result was doubtless obtained by the combined action of knowledge, industry, and skill, of the highest kind.



Devon bull, the property of W. P. and C. S. WAINWRIGHT, Rhinebeck, Dutchess county, N. Y.—received the first premium for Devon bulls over three years old, at the show of the N. Y. State Ag. Society, 1851. This animal, now owned by R. H. VAN RENSSELAER, Morris, Otsego county, N. Y., was bred in England by Mr. QUARTLY, one of the most eminent breeders and improvers of Devon stock. He is a bull of superior points—one of the best of the breed we have ever seen. The artist, unfortunately, has taken the animal in a position by which the figure does him injustice—failing to show the substance, and at the same time delicacy of points and general symmetry, which are united in a remarkable degree.

Advantages of Mules over Horses.

EDS. CULTIVATOR—Having of late received several inquiries respecting the advantage of mule labor over that of the horse, and thinking some communication on this subject might be interesting to your readers, I take the liberty of addressing to you my own experience.

For nearly three years, I have made use of two pairs of mules, and most of the time of one span of horses. The present season, I have two heavy spans of horses, the one weighing about 2200 lbs., the other 2350—while the pairs of mules weigh only 1700 and 1900 lbs., respectively. The horses and mules have both been used in hauling wood, the average load being a cord of green oak. The heaviest pair of mules can outdraw either of the spans of horses, and are now in as good condition as in the fall, while the horses have fallen away very much. In the winter, when taxed to their utmost capacity, the mules are fed 12 quarts of oats each, per day, and the horses 20 quarts; the amount of hay consumed by each being in nearly the same proportion. When not in constant use, the mules are fed little or no grain, and in the summer may be allowed to go unshod without injury. They suffer less than horses from the heat; are not so easily teased by the flies, and are equally hardy to the cold. They are far less subject to disease, and will endure constant labor for a much longer time. As they walk so as to bring their feet almost in an exact line, they are superior for plowing and working between the rows of growing crops, being less liable to tread them down. When hitched to a load, their walk is more rapid than the horse, and I consider them preferable in almost every particular, except for quick or pleasure driving. The mule is not a gormandizer, and if fed sufficiently at night, and it is not convenient to feed again till the next, he experiences no inconvenience.

The first cost of a good pair of mules, is more than a span of working horses; but the mule capital will last for thirty years, while the entire horse capital must be renewed, at least every ten years. My estimate for the relative expense of keeping a horse and mule team, in working order, is as follows:

Span of horses, one year.

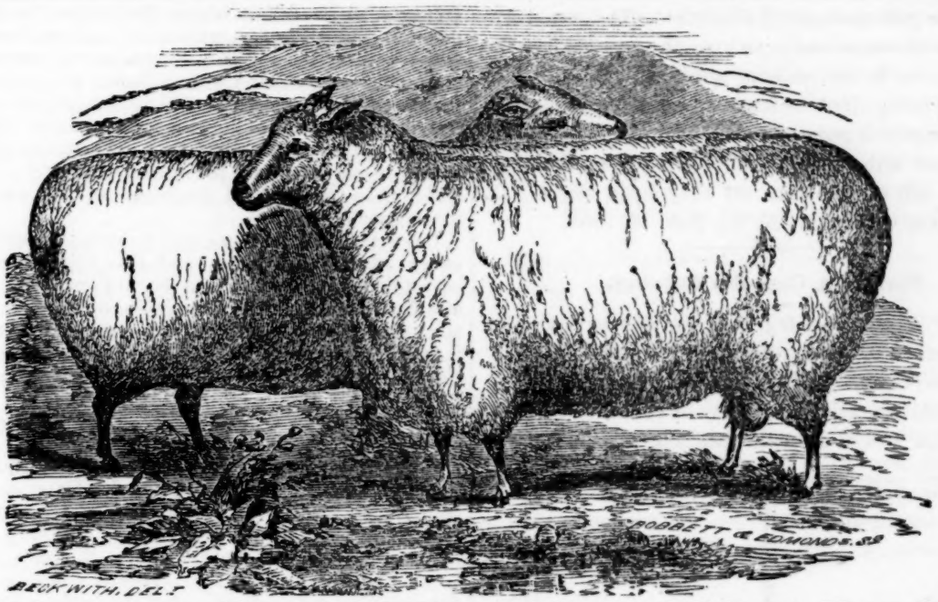
20 quarts oats each, per day—451 bushels at 37½ cts.	$171 00
5 tons hay, at $8 per ton,	40 00
Shoeing once a month, half new,	18 00
Farrier's bill, on an average,	5 00
Depreciation each year 10 per cent on $200,	20 00
	$254 00

Pair of mules, one year.

12 quarts oats, each per day—273 bushels,	$102 00
3 tons of hay,	24 00
Shoeing once in six weeks, half new,	12 00
Depreciation 3 per cent on $350,	10 50
	$148 50
Making a balance in favor of mules of	$105 50

A mule is no more likely to be vicious than the horse. Their vision and hearing seem to be better, and they never take fright—a danger from which you are never secure with the horse.

The breeding of mules is an extensive business in some sections of the western states. They are mostly bought by New Haven shippers, and shipped at the age of three years. The market price of unbroken mules at New Haven, Ct., in large lots, is about $80 each. This is the best place to purchase, as they can then be selected from



Long-wooled ram and ewe, which received the first premium for stock over two years old, at the Show of the New-York State Agricultural Society, 1851. The ram belonged to J. McDonald, Warren, Otsego, Co., N. Y., and the ewe to Williams Rathbone, Springfield, in the same county.

droves, and well matched. At three years old, they will do as much work as a common span of horses, and continue to improve for ten years. It appears to me that farmers might save much by substituting mules for horses.

I suppose that in the United States there are three millions of working horses, whose place might be equally well supplied by mules. In my estimate, I made the balance in favor of the mule over $50 yearly; but allowing it to be only $20, the annual saving of expense would be sixty million dollars. Yours truly, D. D. T. More. *Watervliet, N. Y., Feb.* 1852.

Management of Bees.

In a short article on bees in the January number, I stated that I use Weeks' Vermont hive. Many patterns of hives are now in use, each of which, no doubt, has its excellencies. It is not my purpose to decry any of them. I shall speak of the one I have used, and which has done me good service. As I write to encourage a more extensive cultivation of bees, so that every family residing in the country, may at least provide, at a cheap rate, sufficient honey for its own consumption, I will give some familiar hints on the mode of management, which, in an experience of some ten years, I have found successful.

Let me premise, that every person, whether male or female, who has strength to carry to its place a hive containing a new swarm of bees, can readily become a bee manager. I have had in my employ, a female who could hive a swarm as skillfully and composedly as myself. The fear of being stung is what deters most persons from attempting to keep bees. It is, however, an easy matter to provide against them. I never expose myself to their displeasure unprotected. A pair of thick woolen mittens and a veil made of a yard of bobinet lace, formed into a sack and drawn over the head, will render one entirely safe among them. The most timid person, who will make the trial of going among bees thus equipped, will soon be rid of his fears, and will find them the most harmless and agreeable stock he has ever attended. A successful bee-keeper can hardly fail to become enthusiastic in his attachment to his colonies of industrious little honey-gatherers. He is charmed with the thought that such myriads of winged insects are so entirely at his control and subservient to his interest, storing up with consummate skill, one of the richest luxuries of his table.

Addressing myself to one desirous of commencing the culture of bees, I would say, procure and read attentively a copy of the latest edition of Mr. Week's book on the management of bees. It is eminently a practical work, composed by one long used to the business. For a time you will hardly dare to do all he recommends, but gradual familiarity with your new laborers will inspire confidence, and careful observation will initiate you into the nature and degree of attention you will need to bestow on them. Obtain the right to use the hive; then purchase four swarms, already in such hives if possible; or make some hives, and have new swarms put into them at the time of swarming, by some neighbor who keeps bees. Put only four hives on a frame thirteen feet long. Make the hives of inch and a quarter pine plank, and paint them white, to guard against warping, and the influence of extreme temperatures. Make your boxes half the size of the chamber, having the sides and front entirely of glass, with ten holes for access from below, instead of four, thus equalizing the temperature and inviting the bees to commence much earlier to fill the boxes. White honey in this latitude is all gathered before the middle of August, and it is desirable to secure as much as possible of this for use.

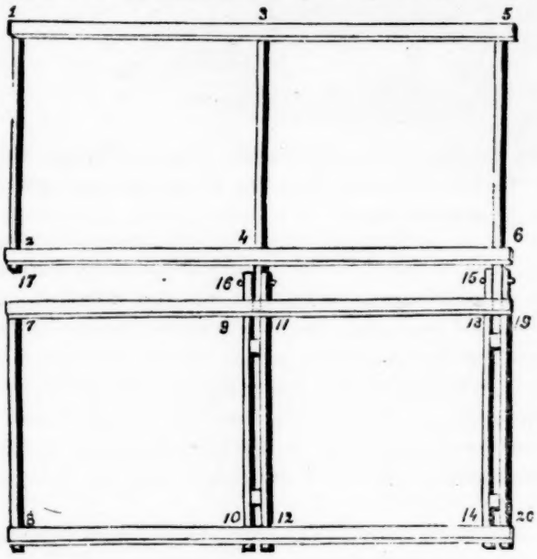
When a swarm comes out, observe where it settles; put on your defenses, set your hive near the front, elevated an inch, hold a tin pan close under the bees and with a table brush, gently detach a portion of the swarm filling the pan, pour them *very gently* at the front of the hive

and fill your pan again, until all are brought down. Apply your brush occasionally to keep the passage into the hive open, and in half an hour or less all will be in, and ready to be hung upon the frame. If a ladder is needed, the same process is pursued with a little more laror. Pass quickly down with your pan full, lest all be on the wing, when you will need to wait till they again alight. H. W. BULKLEY. *Ballston, N. Y., Feb.* 11, 1852.

Plan of a Curculio Catcher.

Facts and figures showing that the Curculio can be certainly, safely, and cheaply resisted.

EDS. CULTIVATOR—In the Cultivator for March, 1850, p. 110, I briefly suggested the plan of a curculio catcher. Within a few weeks after the penning of that article,



the machine, of which the above is a plan, was made. Having used it, with success, for two years, I send you a drawing and description of it. It is made of strips of board, cloth, and nails. The timber which I use is bass-wood, which is light, strong, pliant, and takes nails well. The timber is all of one size, two inches wide, and about three-fourths of an inch thick. The machine consists essentially of two frames, each about nine feet long and four and a half wide, fastened in the centre by two hinges, (as they may be called,) and is covered with cheap and strong cotton cloth, nailed in with small tacks, a little smaller than those commonly used for carpets.

The whole may be shut together like the cover of a book, but not quite so closely, owing to the shape of the hinge.

For very large trees this is too small a machine, while for very small ones it is quite large.

The short pieces, (1, 2, 3. 4, &c.,) are the foundation. They are marked by two lines, drawn near together, indicating that they are set on the edge. Small blocks are inserted below 9–11 and 13–19, and between 10–12 and 14–20, to keep the two parallel pieces apart, so as to admit the pieces 3, 4, and 5, 6, from the other half of the frame, to lie between, act as hinges by the use of a peg or nail at the points 15 and 16. No hinge, or other connection, is allowed at the point 17, as that would fill up the space left for the admission of the tree. These first or short pieces are set or laid on the edge, rather than flat, the better to make a firm hinge. Across these foundation pieces lay the other and larger ones 1–5, 2–6, 7–13 and 8–14, nailing them carefully and strongly at the points where they cross the foundation pieces. These last are laid on flat, as is indicated by the wider parallel lines. This completes the frame.

It will be seen that the foundation pieces 3–4 and 5–6 pass beyond the points 16 and 15, where the nails make the hinges and run under the cross pieces. The object of that extension is that it may operate like the back of a knife somewhat, and prevent the opening of the frame wider than the point of levelness, as that would render it inconvenient in use.

Over this whole frame nail your cotton cloth, on the outer edge of the frame, and also slightly to the two middle cross pieces. Cut a slit in your cloth from 7 to 9 and from 9 to 4, for the admission of the tree. A short stick may be nailed to its outer edge, from 7 to 9. Thus it can be laid back, for the admission of the tree, and then restored to its former position, which completes the circuit of the tree.

Mode of using this Machine.—Let two persons remove it from some outhouse, (where it had been laid up closed for the winter,) lay it open and take hold of it at the opposite side from 19 to 6. Carry it to a plum tree, which is to be entered at 17. If the ground is not planted lay it flat upon the ground and step upon it if necessary, otherwise hold it above the vegetables. Let a third person jar the tree. This is done by having a flat ball-club covered with cloth or India rubber, which, being laid against the principal branches of the tree, is struck a short and quick blow, as that best disengages the curculio from his hold. Let all hands engage in killing the pirates. This is best done with the thumb and finger. This is better than to attempt to throw them into a pail of lye, or tobacco water. The bug is somewhat dry, and this mode is by no means offensive.

Go over your plums. (*peaches*, and *cherries* too, if you have them,) about every other day, till you find you have conquered them.

History of its use for 1851.—I began to use it June 2d, (a little too late for the tenderest sorts of white plums,) and continued its use until the 17th, using it nine times in all, and applying it to 65 trees. It cost three men two hours labor to get round. The wind was frequently so strong as to blow some of the insects beyond the compass of the machine.

Here then are fifty-five hours of labor, equal to five and one half days, of one man, which, at 75 cents per day, amounts to four dollars and twelve and one half cents, which is equal to six cents a piece for my plum trees. This is a small sum compared with a crop of plums.

When first going round, we frequently found 30 curculios on a single tree. On the ninth time, we found but 132 on the whole

Results.—1. My Washington Bolmars, Green Gages, did not flower freely, while they are constintionally more exposed than the dark colored plums. On these the crop was light.

2. Prince's Imperial Gage, and the Yellow Gage, gave very heavy crops.

3. The Bleeker, Elfrey, Damsons, and a plum without a name, bore overwhelming crops.

I ought to state here, though the statement does not affect the present argument at all, that I lost many of my plums, gooseberries, and all my grapes, by wet and hot weather in July, which defoliated the trees, and caused the fruit to rot and drop without ripening. I had a row of Bleeker's Plum in a position where I did not wish to retain them. These, in the hurry of business, were neglected. The curculios took the entire crop; not a plum ripened. So, also, I had three very productive trees which grew in the grass, and were nearly neglected. Here, too, I lost nearly all the fruit.

Conclusion.—Here is a machine, simple, cheap, not easily got out of order, and readily used. If applied at the right time, and with any faithfulness, it is a certain defence against the curculio. Now, if any one with a knowledge of it, permits his choice plums to fall a prey to the curculio, let him be doomed to eat wild plums, and choke pears as long as he lives. Let all, then, who would save their plums this year, be sure to prepare their trap for the robbers in time. Let them, if possi-

ble, begin to use it at least the day before the invasion commences. Let them prosecute the war while the enemy lurks in the field. In two or three years the victory will substantially have been gained, and then a very little timely labor each year, will keep all safe. C. E. G. *Utica, Jan.* 7, 1852.

P. S. Those who are interested in this subject, need not servilely follow my plan. Two things, however, are to be kept in mind, in all precautions to guard plums from the curculio. One is, that it is cheaper and surer to make *direct war* upon him, than it is to set up scare-crows. The other is, that that method which brings him with most speed and certainty, a helpless prisoner at your feet, is the best. I claim the discovery of no new principle. The idea of catching him upon a sheet is not new, but my mode of *adjusting the machinery* is new, so far as I am acquainted with the history of the subject. Other shapes, and other modes of spreading and confining the cloth, may be devised. It has always happened in my experience, that at the time the curculio must be fought, if ever, the state of the wind is such, that all efforts to catch him, upon loose sheets spread upon the ground, would not only be slow and uncertain, but in three cases out of four, perfectly hopeless. A machine such as I have suggested, will cost, to those who have ready access to the right materials, about two dollars. Any common man, who can handle a saw and hammer, can make it himself. My machine, in two years, has not cost one shilling for repairs, and is good for years to come. C. E. G.

Remarks.—We are entirely satisfied of the usefulness and efficiency of the above described frame for catching curculios, having for some years used one somewhat similar. Our correspondent will find a figure and short description on page 182 of the Cultivator for 1848, and also, of an umbrella very successfully used for the same purpose. This frame was made of strips of common sawed lath, an inch wide, and half an inch thick, fastened together at the corners by lath nails, previous annealed to facilitate clinching. The muslin itself, formed the hinges, and the whole being in two pieces, they were not cumbrous, and could be easily managed by one person, though not so expeditiously as if entire, and with an assistant. About two hours were required to make these frames, and their whole weight was about six pounds—about one-third of that described by our correspondent. We think smaller timber might have been used in constructing the latter, so as to reduce its weight about one-half, and it would then constitute the most complete thing of the kind yet known.

For small trees, we have found the large white umbrella, above alluded to, the most convenient and expeditious, as one movement threw all the insects caught on each tree, into a pail of hot water, enabling one person to clear 35 trees in 15 minutes. This umberella was six feet in diameter, and cost two dollars at the umbrella factory. On page 49, of the Cultivator for 1850, R. H. Drake describes his success with an umbrella eight feet in diameter, made after this suggestion.

Our correspondent has shown very conclusively, that his practice may be relied on for entire success, and yet we think some modification may be required where the circumstances are different. Twice or even three times a day in warm weather, and where the insects are abundant, will not be too often to attack them; for if left 24 hours, a dozen will spoil a great many young plums. When the trees are quite large, it will be impossible to jar them sufficiently through a muffled pounder, or by other means, applied to the bark of the tree, without bruising it. The only way is to saw off a small limb, leaving a stump an inch long to be struck a *sharp blow with an axe*. Anything less efficient will be sure to leave a part of the insects on the tree. It is the want of an energetic application of this mode of destruction, that has led some cultivators to denounce it as inefficient.

Cherry Trees Destroyed by Insects.

Eds. Cultivator—An inquiry made by Mr. John Waters, of New-Milford, respecting an insect which destroyed his young grafts, reminds me of something that I should have made public before this.

For several years back I have been perplexed and annoyed by the appearance of my young cherry trees in the early part of summer; for on the springing of the sap they would appear strong and healthy, and seem to promise an early and vigorous growth; but as the buds unfolded themselves, they would begin to shrivel and to lose force, and after struggling for a few days or weeks, would finally drop off entirely.

For a long time, I supposed it to be the effect of our very cold winters, and had almost abandoned the hope of rearing the finer varieties in these parts; but as there was occasionally a tree that did not show any such signs, although equally exposed to the weather, and would thrive exceedingly, I was led to believe it to be the work of some insect or animal, which had not yet been described as a tree-destroying thing.

I was soon convinced that it did not commit its depredations in the day-time, for I watched closely for sometime, without discovering anything, and yet the trees continued their sickly appearance; but on watching by night, I readily discovered that the young leaves were eaten as fast as they shot out, by an enormous beetle-bug, that only gnawed by night. I also discovered that these same beetles rose from the ground immediately under the branches of the trees; and by further examination by day-light, I found that there were from one to fifty of these bugs under every tree, either in the mulching or in the mellow soil. Now, after having made this, (to me,) very important discovery, I proceeded at once and deliberately, to knock each one of these malicious beetles on their heads, until their jaws were broken, and they were thus incapacitated for doing any further injury to the cherry trees. My trees at once began to assume a fine foliage and to renew their health, and since then I have had no difficulty in giving them an early start.

My practice is now to visit each one of my *small* cherries, two or three times a week during the first weeks of their annual growth, and to *hoe* them carefully. In this way I keep a fine nest for the bugs directly around the trees, which they greatly prefer to any more distant, and then I can, as I hoe, pick them out and cripple them at my leisure. Now, I am quite confident that Mr. Water's trouble is occasioned by this same great beetle, which is very common in this whole country.

It is a bug about three-fourths of an inch in length, of a dark red color, and with a small black head. It is commonly noticed when it gets into the house on a fine May or June morning—when, after having made a desperate pass at the nearest candle or lamp, it brings up against the opposing wall, and with scrambling vain efforts to regain its lost equilibrium, precipitates itself, sprawling, upon the floor. But seriously, the effects of this beetle upon my trees, before I found out its practice of eating the young leaves, was very pernicious. At least one tree in ten was destroyed; and those they did not destroy they rendered spare and gaunt in their forms. Wm. R. Manley. *Newport, Herkimer Co., N. Y., Feb.*, 1852.

Vines for the Decoration of Cottages.

We have heretofore noticed A. J DOWNING's work on Country Houses. Every person familiar with his writings, must have observed the perfect fitness or appropriateness of every part of his ornamental designs; there are no incongruous groupings of objects beautiful when taken alone—no solicisms in taste. For this reason his remarks on the *color* of houses, their *exterior decorations*, &c., never fail to be valuable. With the hope of interesting our readers, as well as impressing them with a more distinct knowledge of the merits of this work, we furnish a few additional extracts. The expression which a building derives from the aid of external objects, and especially from trees, shrubs, and vines, is thus pointed out:—

"It is upon these latter objects that the true *rurality* of almost all simple cottages depends; and nine-tenths of all the cottages that have endeared themselves, through their local and living beauty, to the hearts of true poets and genuine lovers of nature, have owed most of their charms rather to this rurality—this wealth of bower, and vine, and creeper, than to any carved or sculptured gables, window heads, or other features bestowed by the careful hand of the architect.

"Take almost any of those exquisite cottages in an English landscape, which charm every beholder by a wonderful beauty, found in no other land in the same perfection, and subject it to the dissecting knife of the searcher after the secrets of that beauty, and what does he find? That not one of these cottages is faultless, in a strictly architectural sense—nay, that they abound with all sorts of whimsical and picturesque violations of architectural rules and proportions, and are often quite destitute of grace of form or outline.

"But on the other hand, they are so bewitchingly rural! Partly, to be sure, by their thatched roofs, and latticed windows, and low stone walls, all of which seem to grow out of the ground, and to be rather a production of nature than of art, (proving incontestibly how genuine is the love of rural life in those who build and inhabit such cottages,) but mainly through the beautiful vines and shrubs that embower them, which, by partly concealing and partly adorning their walls, give them that expressive beauty of rural and home feeling which makes them so captivating to every passer-by.

This *drapery* of cottages—the vines that climb, or trail, or creep over them, and around their porches and windows—deserves, then, something more than a passing glance from all who would understand the secret of making a simple country house beautiful at little cost. For it must be remembered, also, that while chiselling ornaments in stone, or carving them in wood, soon makes a figure in one's account book, a few roots of those vines which will soon grow into forms of graceful and perennial beauty, may be had for a trifle, or will be gladly given by some friend whose garden overflows with its wealth of shrubs and climbers.

"But, though all vines are beautiful in their appropriate places, they are not all fitted for the decoration of rural cottages. Some are only at home when trailing over rocky precipices, others when climbing high trees, and others, again, are so delicate as to need the support of slender trellises in the flower-garden.

"A vine fitted by nature for the drapery of rural cottages, should unite fine foliage, which holds its verdure for a long time, and is not often the prey of insects, with a good *massy* habit of growth. If its flowers are also beautiful or fragrant, so much the better, but by no means should fine flowers, which last for a fortnight, lead us to forget fine habit of growth and good foliage, which are constant sources of pleasure.

"Besides these requisites, we must add, that popular vines for a cottage must be such as are perfectly hardy, and need no protection, and which have a way, for the most part, of taking care of themselves—in other words, which will grow into pleasing or picturesque forms with only an hour or two's pruning or tying up once a year.

"For cottages at the north, one of the best hardy vines is the Virgina creeper, (better known as the American Ivy, or five leaved Ampelopsis,) a wild plant which grows with wonderful luxuriance, and attaches itself without any assistance to wood or stone, by the fibres it throws out from its stem. Its leaves, glossy green in summer, but turning to the finest crimson before they fall in autumn, the rapidity of its growth, and the absolute no-care-at-all which it requires, will commend it as perhaps the best of all plants, when the effect of foliage is desired in as short a time as possible, as well as for concealing or adding to the beauty of any part of a *blank* wall of a cottage.*

"The Chinese Wistaria, now perfectly naturalized in the Middle States, is one of the finest vines for the pillars of the cottage porch or veranda. It will extend its shoots to 40 or 50 feet, if allowed, while it may be kept within the limits of a small column, if desired. Its long pendent clusters of delicate pearly lilac flowers, have a strikingly elegant appearance when properly scattered over the shoots in May, and its abundant light green foliage has a pleasing effect, whether for trellis, wall, or veranda.†

"Climbing roses are also great favorites for pillars and porch trellises. The most deservedly popular for the cottage, are the Boursalt and the Double Prairie roses—because they have fine foliage, grow very rapidly and luxuriantly, blossom profusely, and are perfectly hardy in all parts of the Union. The *Amadis* is the best variety of the Boursalt, and the Queen of Praries and Baltimore Belle the best Double Prairies for cottage decoration. Amateurs who wish to add a still further charm, and are willing to bestow a little more care on them, may, by budding the long shoots with Bourbon roses, have a succession of fine flowers every day during the whole growing season.

"In the Southern States, the fine Noisette roses, such as Cloth of Gold, and Solfaterre, take the place of the Prairie roses of the north.

"Among the honeysuckles—the "lush woodbine" of the poets—there are two admirably adapted for cottage adornment, viz: the Japan or Evergreen Honeysuckle, (*Lonicera japonica*‡) and the Trumpet Honeysuckle, (both scarlet and straw color.) The former is deliciously fragrant, and blooms all summer, holding its masses of rich, dark green foliage till mid-winter; and the latter, though not fragrant, grows in fine masses, and flowers most abundantly at all times. Neither of these honey-suckles is infested with the insects which deform some of the other species, and render them unfit to be planted near a cottage window.

"For cottages of stone, brick, or rough-cast, there is no climbing plant in the whole world equal to the Ivy—the evergreen Ivy of Europe. Its dark green foliage forms at all seasons of the year, the richest drapery that ever festooned or wreathed either castle or cottage; and we need say nothing of the associations without number, which the mere sight of this plant always brings to the mind.

"The Ivy does not thrive very well in New-England, except in sheltered places, for the winters are rather too severe for it; but in all other parts of the Union, it grows

* In some of the elm forests of of Western New-York, growing on the broad lowlands, this plant presents a most conspicuous and striking appearance, when its leaves change color in autumn. The branchless trunks of the trees, to a height of sixty or seventy feet, are not unfrequently covered from bottom to top with an uninterrupted mass of brilliant crimson, and even many of the larger limbs up among the dense green of the forest, are enveloped in the same fiery glow. EDS. CULT.

† One of the finest plants of the Wistaria in this country is now growing on the grounds of Thomas Hogg, at Yorkville, near New-York. It covers an arbor, some fifteen feet in length and breadth, and there were the past season about *four thousand* racemes of flowers, each raceme being nearly large enough to fill one's hat. EDS. CULT.

‡ Chinese twining Honeysuckle of some.

easily and rapidly. It likes a dry and loose soil, and should, at the north, while young, be a little protected, for a winter or two, with boughs of evergreens, till it gets established. It will often thrive in cold sites, on the north sides of houses, or under the shade of trees, when it fails in sunnier sites, because it is the sunshine, in mid-winter, and not the frost which injures it in the latter situations. The Giant Ivy, (now quite common about Philadelphia) is a larger leaved, richer looking, and more vigorous variety, than the old species.

"In New-England, the American Ivy or Virginia Creeper may be used as a substitute for the European Ivy; both bearing a resemblance only in attaching themselves firmly (by the little rootlets sent out from their branches) to the wall, however hard it may be, and neither of them injuring it. Indeed, the European Ivy preserves a stone wall from decay."

To those who prefer uniting the useful with the beautiful, the grape and the hop are recommended—of the former, the Catawba and Isabella are named as thriving best, and to which we would add the Clinton, as being remarkable for its hardiness, free growth, and dense masses of light colored foliage. The hop is justly pronounced the most rustic of all climbing beauties, and ornamental in the highest degree, although usually condemned to a pole in the kitchen garden or hop field. For houses that need occasional painting, it is proposed to place the trellis for the support of climbers, at least a foot from the exterior walls.

We cannot extend our extracts further—and our readers who may be interested in the subject, are strongly recommended to procure the work at once, and those who are not, can hardly fail to become so, by reading one-tenth of its contents.

Product of Native Cows.

Eds. Cultivator—In your article in the January Cultivator, on the produce of native cows, I was gratified to find that *you* appreciate, in some measure, the value of native cows—sure I am the public do not. Without looking farther, we are very apt to value an animal in proportion to its cost; and as imported stock has cost much more than our native, the public have believed they are so much the more valuable. In comparing the produce of two cows for instance, we have in a measure disregarded the manner and amount of feeding, and the size of the animals.

Now it is certain that the same cow may be made to produce from one-quarter to one-half more milk, by the manner of feeding—that is, whether fed on grain, or grass feed alone, and the difference in the quality of pasture alone, will produce nearly the same results.

Again, animals like the improved Short-horns, will average from one-fourth to one-fifth larger than our native cows; and to make a fair comparison between the breeds, the Short-horns should produce as much more as they are larger in size, because the cost of keeping animals, as a general rule, is in proportion to their size. There may be exceptions to this rule; but that will not militate against the justness of the rule—therefore the worth of the animal may be estimated by comparing the cost of keeping with the annual produce.

Now, taking these data as a guide in judging, we can very easily ascertain the comparative value of different breeds of cattle as milkers. Having been for several years connected with Agricultural Societies, I have been in the way of collecting facts respecting the produce of cows, which have been presented for premiums at the different exhibitions within Hartford county, for years back; and these facts have satisfied me that in our desire to improve our breeds of cattle, we have overlooked or misprized the worth of our native stock.

Among the number of certificates, made by the owners of the animals, and now in my possession, I propose to give you an abstract of two or three as a specimen of the produce of pure native cows—that is, of descendants of animals brought to this country more than 60 years ago, and you may publish them or not as you shall deem best. I think I can vouch for the accuracy of them, because they are from farmers I know, and in whom I have full confidence. The first is from Mr. Porter, a near neighbor, who was requested to give the whole product for a year, which is the only one I have been enabled to obtain for that length of time. Mr. Porter's verbal statement, on giving me the certificate, was, that he owned only this cow, and used during the year milk from that cow for his tea and coffee, and that occasionally he ate milk at night—(there were two only in the family.)—also that a part of the year he furnished a neighbor with milk for tea. His certificate gives the weight of each separate churning during the year, with the date of the same—I will give you the product of each month, as shown in his certificate. The cow was of medium size, kept on grass and hay only, without grain—age of animal eleven years:—

	lbs.	oz.		lbs.	oz.
October,	48	2	May,	36	5
November,	49	15	June,	44	10
December,	40		July,	38	6
January,	39		August,	30	15
February,	33	12	September,	36	7
March,	31	5			
April,	51	11		463	8

The Purdy cow produced 16 lbs. in seven days—the owner thinks she will average 17 per week through the summer months, provided it is in her first month of milk—this cow is one-quarter Devonshire, three-quarters native.

The next is a certificate of a heifer of two years—five months in milk—reserved three pints milk daily for family, and produced 13 pounds butter from 9th to 15th October, on grass feed alone—the cow is now seven years old, more than medium size, and I have assertained from the family who own her, that during the past summer, she has produced daily from 24 to 26 quarts of milk,—grass feed only.

Another was a trial, at my request, in the month of September, owned by W. Stephens. It was a dry month, and the feed not as good as earlier—5½ months in milk—produced 14 pounds in seven days. Mr. Stephens thinks they made two and a half pounds per day from her in the preceding June—cow less than medium size.

The Mallory cow—milk weighed 46¼ pounds per day—made 10 pounds butter in 7 days, besides selling five quarts per day of milk,—month of June, grass feed—medium size.

Now, ask your American Agriculturist friend, to show his certificate of cow kept in the same way, of not larger size, and when produced, if satisfactory I may perhaps send you a second batch that I have in reserve. Respectfully yours, Egbert Cowles. *Farmington, Ct*

Review.

"THE DAIRYMAN'S MANUAL: being a Complete Guide for for the American Dairyman. With numerous illustrations. By GURDON EVANS, M. A."

BOOK-MAKING is working wonderful progress in these United States. Genuine *authorship* is quite another matter. With the first, our printing presses teem with a fecundity possible only to the facility with which paper, types, and printing ink, are supplied. Its *quality* in the way of merit, appears to be of little account, provided the book will sell. The current demand for agricultural books, seems as likely to be supplied from this branch of the trade, as that of any other kind of literature; and the work now presented is a genuine, unadulterated type of the book-making genus.

A "Dairyman's Manual," as this book professes to be, is much wanted in our country, of the right kind; and whether this is the one required, we shall proceed to examine. To begin: it is an old fashioned notion—perhaps it may be nothing more than a notion in the minds of some people—that an author, or even a creditable bookmaker, should have some experimental knowledge of the subject on which he writes, or compiles, as almost every subject contains some chaff among the wheat which it offers; and the knowledge in question is necessary to sift the one from the other; and, when the office of selection is the only toil of getting up the work, the winnowed grain only, should be given to the public.

To say that this book of 235 pages, in octavo, is well printed, in clear, large type, and on good paper, which it is, is no more than should be said of any book worth printing at all, in the present perfection of the typographical art. So far it is unobjectionable. In other things it has merit. It is well divided into chapters on the several parts of the subjects discussed; and which, if well selected, might become a quite passable authority with those who require to consult its pages. That the compiler does, either theoretically, or practically, understand the subjects of which he has treated, and arranged, I must be allowed to entertain some doubts. Still I am disposed to deal with him candidly and kindly, commending his judgment where it has been well exercised, yet condemning it frankly where he has played the quack. Fidelity to the truth of agricultural progress, and to the public, will not permit me, for the sake of kind words, towards the book-making fraternity, to aid in palming off either their mistakes or their crudities, upon the confidence of our farmers.

The first chapter of the work under consideration, alludes to the history of the dairy, going back to the Book of Job for authority, and in three pages bringing the subject down to the current time. Chapter II. treats of the importance of the dairy, by giving some statistics of the value of cows, and their dairy productions in the state of New-York, together with the produce of several individual cows, from recorded statements already published, principally from the volumes of Transactions of our State Agricultural Society. Chapter III. contains a brief notice of some different breeds of cattle, acknowledged to be from the "Encyclopedia of Geography," accompanied by two portraits—a Jersey bull and cow—taken from cuts of the aforesaid "Transactions," and followed by some common-place remarks, for the fortieth time reiterated, and as many times discarded, of the policy of rearing up an *American* breed of dairy cows from the common heterogeneous blood of our *native* stock, as being superior to any improved foreign blood for dairy purposes.

Chapter IV. on the "different breeds of Cows," with the cut of a Short-horn bull, opens decidedly rich. For the instruction of my readers, an extract is offered:

"The Short-horn, or Durham. This a high bred English variety, some branches of which date back an uninterrupted pedigree for many generations. The improved Short-horns *originated* with Mr. Charles Colling, a distinguished cattle breeder of England. He owned a bull named Hubback, of the Teeswater breed, smaller than that breed in general, but remarkably disposed to take on fat. From this bull, and a Galloway cow, he commenced that famous stock, the IMPROVED SHORT-HORNS!"

This will answer, I think, to start with; and although one would infer from a sort of general allusion to his authority for this paragraph, that the author was so instructed from an article in the "Transactions" of 1841, (mis-printed in this book as 1849,) by Col. H. S. RANDALL; he should have had discrimination enough to discover that Col. RANDALL neither said nor inferred any such thing, in the article in question.

This reiterated slander upon the genealogy of the Short-horns, by a class of men who profess to *instruct* the public, but who are either too ignorant, or too lazy to investigate the truth, has been so long chronicled through the pages of our agricultural books and publications, that I here desire to place my finger upon it, in a standing record in your pages, and to settle the question as it should be. The long and short of this Colling, and Hubback, and Galloway matter, is this. The Short-horn breed of cattle can be traced, in the north-eastern counties of England, back, not only through many "generations," but for many centuries. The bull "Hubback," about which so many erroneous assertions have been made, touching his lineage, and the short time he was used as a stock-getter, was, according to the best investigation, a thorough-bred Short-horn, and got calves years before he became the property of Mr. Colling, and for several years after Mr. Colling sold him; and Mr. Colling never ascertained his great value until after he had parted with him, and the bull became the property of Mr. Hubback, from whom the bull afterwards took his name. This bull was calved in the year 1777. The Galloway cow, in question, which was the great grand dam, by other Short-horns bulls than Hubback, of the cow Lady, bred by Charles Colling, only one-eighth in Galloway blood, and seven-eighths Short-horn, was calved in 1788, and Lady, her great grand daughter, was calved in 1796. From this cow Lady, and his own unadulturated Short-horn bulls, Mr. Colling bred several animals, which he sold at high prices at his great cattle sale in 1810; and from men, among whom was Berry, an often quoted authority, who purchased this bastard blood, the descendants of the cow Lady—although the animals possessed it in a very remote degree—the story has arisen of their superior value, principally to raise the *selling* reputation of their own stock. Hubback had nothing to do with this recorded "Galloway cow." He died before she was born; and as to originating the "improved" Short-horns, Charles Colling had no more to do with it than the man in the moon. He has repeatedly confessed that he purchased as good cows of other cattle breeders, as any that he ever bred himself; and the chief merit of Colling is, that although a good breeder, he was, by the energy of his character, and his perseverance, the leading man of his day in making the Short-horns famous, and introducing them throughout many distant counties in England, where they had not hitherto been bred.

We fancy that the American breeders of Short-horns will not give to our author an assembled vote of thanks for his information on this head, which, if true, would at a comparatively recent date, make these favorite and highly valuable race of cattle, a compound of bastardy little likely to perpetuate the "long line" of ancient and legitimate blood and quality so universally attributed to them. Three pages of extracts, not over-well selected, with a touch or two of their dairy qualities, do up his notice of the most valuable race of cattle in existence.

Next follows a notice of the "*Devonshire*." We have always supposed these to be *Devons*, simply, without the *shire*. The author puts them down as *no* milkers, and consequently, in their high blood, unfit for the dairy. Had he known more about Devon cows, he would have written differently. When he can produce a cow, weighing, in ordinary condition, not over nine or ten hundred pounds, which will produce more milk, or butter, or cheese, or of better quality than numerous thorough-bred Devons that can be produced in this and adjoining

states, we shall have a little more respect for his authority.

The Herefords and Ayrshires come next under review, in which he quotes Youatt, the English author, and but two or three pages are given to them. He notices very favorably, Mr. Prentice's fine Ayrshires, with a portrait or two from the "Transactions." With Mr. Corning, however, our author must have an account to settle, as the Herefords are given the cut direct, in the omission of any portrait of that distingushed race.

"Breeding for the dairy," is considered in Chapter V., in which some sad mis-prints, as elsewhere, occur in the names of animals—our author either does not write plain, or his proof-reading has been neglected. Here is an attempt to re-laud Col. Jaques' famous herd of "Cream-pot" cows, bred on his "Ten-hills farm," near Boston, as a "distinct breed" of American dairy cows. To the uninitiated, this may appear a new discovery, and achievement. It is simply an evidence to those who understand the subject, of what boasting and assurance can do, in palming off a very common thing upon such as know no better. Col. Jacques' cream-pots are good animals, no doubt. We have seen both the cows and their "cream," together with the milk which produced it; and it was all excellent of its kind. But Col. Jaques' cows are nothing more than the produce of Short-horn bulls, and good, native milking cows, and such as every breeder of such cattle can produce, and has produced, by the score, although they may not have made quite so much fuss about it. If American dairymen wish to produce the best "cream-pot" cows in existence, they have but to get a first quality, thorough-bred Short-horn bull, of a good milking tribe, and breed him to the *best* milking cows they can find, and after a generation or two, they will be in possession of a race of cows meeting their just expectations in all that constitutes excellence in the dairy cow. The author can, neither from his own observation, or by printed extracts from others, give us any better *practical* truth than this.

The next two chapters, VI and VII, are taken from Prof. Johnston, Sprengel, and other foreign and domestic authorities, hurried over with much less care and attention than their subjects are entitled to, mainly, we imagine, from the inability of our book-maker to understand their importance. In this latter chapter, the everlasting "Oaks" cow—he leaves out her cousin, the equally famous "Nourse" cow, neither of which ought to be mentioned without the other—"of the old breed, bought out of a drove," to prove their superiority, by this single specimen, out of millions of inferior ones, to any thing among the *improved* races. What a convenient thing it is that we have the chronicles of two such famous cows, with which every non-improver can at once sledge-hammer down his antagonist who advocates any thing of a better kind, and prove the superior excellence of the "old sort of cattle!" It is quite as edifying as the remark of an old crone that we knew in our boyhood, who, whenever great manual strength was in question, always squeaked out, that "after all their big stories, no man was half so strong as Sampson; and as for fox-hunting, the best pack of hounds, and all the shooters in the neighborhood couldn't hold a candle to him."

Chapter VIII, gives us a very good plan of a dairy barn, and cheese house, taken from one built by the Society of Shakers, at New Lebanon; and observations on dairy cows, and their keeping; all very well, winding up with the perpetually quoted doggrel lines, from the English Farmer's Magazine, describing the qualities of a good dairy cow:

"She's long in her face," &c.

The next two chapters, comprising some 73 pages, contain directions for the cheese and butter dairies, made up of extracts chiefly from the Transactions of the N. Y. State Agricultural Society. These, so far as they go, are well enough, but are not, in completeness, what should be expected from one who assumes to write, or even *get up* a book on a subject of this importance. The subjects in hand are neither experimentally, nor philosophically handled; and although a considerable amount of detached information is given, it is not of a kind to instruct the dairyman in the detail, or in the successful prosecution of his business. Such isolated facts, drawn from the recorded operations of others, without the attendant circumstances to their success or their failure, owing to climate, soil, or position, can scarcely be a safe guide to the beginner in the prosecution of his labors; and certainly of very little account to the established dairyman in developing new ideas for his guidance.

The subject is a broad one, requiring mature experience, great observation, and an enlarged capacity, to instruct the dairyman of our country in what particularly appertains to their calling; and we fear it will be a long day before we shall find a work which will combine the experience, thought, observation, and *ability* which its importance demands. Mere compilations of miscellaneous matter may be got up by the score; the fledglings of the school-house, or the chemical lecture room, may essay in a thousand efforts to enlighten the public, or what is probably of more immediate consequence to them, to put a few extra dollars into their pockets, by the sale to a credulous public of their crude scissor work; but we may look in vain for a competent authority on the subject until some man of mind shall address himself to the task, and devote the time and talent to its prosecution, necessary to its full understanding, and for which he will hardly, as yet, get an adequate compensation. Such a work I should hail with heartfelt pleasure, and would do my best to advance, and to circulate.

The remaining eight chapters of the book are devoted to diseases of cattle, and their cures, taken from Youatt, and just enough of them to make it of very little value to any one who needs a work of the kind. Better to apply to Youatt at once, than to resort to the emasculated text of a competent authority at the hands of one who confessedly does not understand the subject which he is attempting to handle. We confess, in all candor, that the book is little, if any better, with this medical addition to its pages.

It may be thought that I am unnecessarily curt with the pages of my young friend, who with laudable motives, no doubt, has got up his book for the instruction of our farmers and dairymen. I would do nothing to wound his feelings, or to cut down his ardent aspirations for either fame or fortune. Public attention is fast turning its eye to our extended agriculture. It is more rapidly enlisting the talent, the thought, and the capital of our country, into its interest, than formerly, and it is important that the young inquirer be not led astray by the crudities of those who write without a knowledge of the length and breadth of the subject before them.

TLATANUS.

FOOT-ROT IN SHEEP.—An intelligent correspondent of Moore's New-Yorker, considers this disease as not contagious, except in its most virulent state. His own flock, of three or four hundred, had been perfectly healthy for a long period,—no disease had ever prevailed among them—they were on high land, well watered,—not a rod of wet, stagnant, or swampy ground—remote from all other sheep,—not a hoof from any other flock had been among them—yet the disease came, slightly on a dozen at once, and during the season some 80 or 100 were attacked.

CHOKED CATTLE.—A correspondent of the Mass. Ploughman says—"Warm a small quantity of lard, and mix with it a small quantity of gun-powder, and pour into the throat. I *once* prepared a second dose, but had no occasion to use it."

FOOD FOR SICK ANIMALS.—The American Vet. Journal states that an excellent diet for sick animals, is simply *scalded shorts*. When a horse has taken cold, with discharge from the nostrils, the *mash* may be put into the manger while hot, with a view of steaming the nasal passages.

NOTES FOR THE MONTH.

ACKNOWLEDGMENTS.—Communications have been received, since our last, from Granite State, L. C. B., B. B., S. B. Buckley, C. F. W., D. W. C., F. Holbrook, B. J. H., H. C. W, John Diehl, Elizabeth Diehl, Salmon Cook, W. P. B., G. B. Smith, S. M. Dorr, Prof. Norton, L. L. W., Geo. W. Coffin, Jesse Charlton, Excelsior, B., Daniel S. Curtis, P., A. Subscriber, P. F. E., W., F. B., Plowman, Evelyn, Warner, J. R. P.

BOOKS, PAMPHLETS, &c. have been received as follows: Address of Col. M. P. WILDER, at the N. H. State Fair, from the author.——Transactions of the Norfolk (Mass.) Ag. Society, for 1851, from Hon. M. P. WILDER, Pres't of the Society.——Walks and Talks of an American Farmer in England, with illustrations; by FRED. LAW OLMSTED, from the publisher, G. P. Putnam, New-York. ——Transactions of the Hampshire (Mass.) Ag. Society for 1851, from J. W. BOYDEN, Sec'y——Transactions of the Middlesex (Mass.) Ag. Society for 1851, from SIMON BROWN, Esq., Editor N. E. Farmer.

PRESERVING GRAPES.—We received on the 12th March, from Dr. T. W. BLATCHFORD of Troy, a box of grapes, in nearly as fine condition as when picked from the vines last autumn. They were packed in coarse oak saw-dust, the finer particles of the dust having been separated by sifting.

☞ A correspondent wishes a plan for a cheap hen-house. Who will furnish a good one?

SHEEP HUSBANDRY.—We have received replies to the inquiry of "W. M'C.," in our February number, from A. H. AVERY, Galway, N. Y.—B. H. ANDREWS, Waterbury, Conn., with samples of wool—L. and A. WHITING, Torringford, Conn., who all think they have such sheep as our correspondent desires. We have also, a valuable paper from D. S. CURTIS, Esq., of Canaan Center, N. Y., on the general subject of breeding sheep, for which, with the others, we shall endeavor to find room next month. "D. W. C.," Tunbridge, Vt., will find the questions he proposes, discussed in these communications.

We have also been furnished with the report of a committee appointed at a meeting of farmers in West Westminster, Vt., to examine and report on the merits of the flock of French, Spanish, and Silesian Merino sheep, imported last year, by GEO. CAMPBELL, Esq., of that town, and WM. CHAMBERLAIN, Esq., of Red Hook, Dutchess co., N. Y. The publication of this report in our pages, seems unnecessary, inasmuch as all, or nearly all the facts embraced in it, may be found in a communication from the Hon. F. HOLBROOK, in our last volume, page 310. The same committee are to be present at the shearing of this flock, and when their report is made, we shall be glad to give it a place.

HOMER.—We have been presented, by P. BARBER, Esq., with a beautiful colored lithographic view of this pretty rural village, situated in Cortland county in this state. On the rising ground, back of the village, are exhibited some of the finest farms in the county. Among them, we notice those of Messrs. P. Barber, Israel Boies, A. Ballard, A. L. and Geo. Chamberlain and others. The print is from the establishment of Endicott & Co., New-York, and is well executed

CULTIVATION OF FLAX.—If practical proof were wanting of the pecuniary advantage, resulting from scientific investigation, the recent invention of flax-cotton would be a case in point. A description of the peculiarities of the flax-cotton and the mode of its preparation has been published in the Cultivator. Extensive preparations are being made for the manufacture of linen from the improved article, and the attention of farmers is invited to the profit of cultivating flax. A pamphlet, together with a sample of the prepared flax, has been received from Mr. A. CAMERON of New-York. The flax is white and soft as cotton, while it seems to retain the firm and delicate fibre peculiar to itself.

TRANSACTIONS OF COUNTY AG. SOCIETIES.—We are indebted to our friends, in different parts of the country, for copies of the Transactions of different County Ag. Societies. Some of these, are contained in a single newspaper, and some in pamphlets of 50 to 100 pages or more. They embrace, generally, the annual Address before the Society, the Reports of the Judges who award the premiums. and some of them, Essays of great interest, especially to the localities where published. We have had recourse to these Tranactions, for many important facts, heretofore communicated to our readers, and intend to draw largely from them hereafter. In tendering our thanks for them, we wish to make a suggestion to such Societies as have not adopted the plan of publishing annual reports of their doings. We know of no way in which they could more cheaply promote the objects they have in view, than by circulating through their counties, an annual pamphlet, containing the usual address, reports, &c. Let their speakers and their committees understand that their papers are all to be published; and that such reports are expected from them as will be creditable to the Society, and useful to the community. In addition to this, premiums might be offered for experiments and essays on subjects of practical interest to each locality. In this way, a considerable amount of important information might be collected, and circulated very generally in the different counties, and among many who never see an agricultural paper.

A NATIONAL UNIVERSITY.—Spirited meetings have of late been held in this city, for the purpose of discussing the importance of an Institution of a more broad and comprehensive character, than our colleges, and urging its claims upon the Legislature. These meetings have been addressed by Prof. MITCHELL, Prof. PIERCE of Harvard University, Prof. BACHE of Washington, Hon. SAML. B. RUGGLES of New-York, as well as by distinguished gentlemen of this city. There seems to be a deep interest among scientific and literary men, in this project, and there can be no reasonable doubt, but that the establishment of such an Institution would be the crowning stone to the present incomplete system of education. The wants of the Agricultural community would be cared for in this plan, and it would form a model for and nucleus to lesser institutions, designed to raise the standard of popular education. The warmth with which the proposal has been received by the leading scientific

men of the country, goes to show, that the so-called literary *aristocracy* of the day, against whom so much cant is hurled, do not exist, and that no class of community are so much in favor of diffusing widely the benefits of a practical, sound education, as thorough scholars.

LARGE AND SMALL FARMS.—W. A. ELA writes, "I wish you would lay down some plan for farmers with small means and large farms, which would convince them that by giving away two-thirds of their land, they would be better off and raise more than to skin over the whole."

PLANS OF FARMS.—The same correspondent remarks, "I take the liberty to make one suggestion in regard to your subdivision of farms. That is, that the farm buildings should be moved back at least one tier of lots from the highway. I am aware that I have a great majority of farmers against me, but I think for one to be 20 rods from the highway and the view of a beatiful lawn from the front of the house, would well pay for the extra travel in getting to the public road, and whatever may be written upon the subject should be to correct bad taste, although it may be against established custom." [We always hail, as the desert-traveller does an oasis, all indications of a taste for rural beauty in connexion with country dwellings, and of course could not object to a sacrifice of land or nearness to the road, to the increase of landscape effect. It will perhaps, however, occur to our correspondent that a greater perfection of this nature would consist in trees and lawn on the different sides of the house, instead of being only in the direction of the road, so that the spectator will not have to keep his head fixed in one direction, for fear he may see what is not agreeable. Neither will the passing traveller be compelled to reserve his sight till he gets exactly in front of the dwelling. EDS.]

SPLITTING OF CHERRY TREES.—D. C. RICHMOND, of Sandusky, informs us that some of his trees have split the whole length of the trunk, owing, as he thinks, to the severe weather of winter. He proposes to keep the bodies well wound with straw during winter on the first indications of the disaster, and intends to keep the parts bound together by one or more iron bolts, secured by nuts and screws. We have had no experience with trees similarly affected, but see no harm likely to result from bolting the parts together, especially when the bolts are covered with new wood. In the mean time, an application of grafting-wax, paint, or still better of a solution of shellac in alcohol, to any wounded surface, would doubtless be quite useful. Driving in nails could not be of any use whatever, further than their mechanical effect —if the trees need iron, which is very questionable, it could be most naturally and equally given by a solution of some salt of iron at the roots.

PLAN FOR ILLINOIS STATE UNIVERSITY.—We have received a pamphlet from the pen of Prof. J. B. TURNER, presenting in a clear, vigorous style, the arguments in favor of an Industrial University. The details of his plan do not differ essentially from others, which are before the public. The interests of popular education are claiming notice and gaining ground everywhere.

POTATO ROT AND RUST.—R. YOUNG (near Louisville, Ky.,) states that the only portion of his potato fields where the rot was destructive, was in a rich cavity or basin where the growth of the plants was most luxuriant. He has observed, too, that it is in these localities that his wheat is most affected by rust—in both of which cases he ascribes the difficulty to an overgrowth and superabundance of moisture in the plants, and suggests whether manure copiously applied to such crops may not increase the disaster, and asks for information.

There is no question but that rust in wheat is often greatly promoted by a luxuriant growth of stalk, occasioned by an undue proportion of mould or vegetable matter in the soil, and that the remedy consists in a greater application of mineral and nitrogenous manures. We are by no means sure but that these might be advantageously furnished in rich *yard* manure. Soils vary, and experiment must determine. As for the potato rot, it remains involved in much mystery, but a moderately fertile soil is certainly more favorable to the health of the crop, than one unusually rich.

DESTRUCTION OF THE PEACH CROP.—Mr. J. CLARK, of Lewis, Brown co., Ohio, writes us, that the peach crop in his section of the State, is entirely destroyed by the frost. On the 20th January, 1852, he says the thermometer fell to 15° below zero, and after spending nearly half a day in examination, he did not find a single live bud. This appears to confirm the statement, that the peach will not endure a temperature colder than 14° below zero. Heart cherries and fine plums have shared the same fate.

RESULTS OF DRAINING.—It has been remarked, that "to apply manure to undrained land, is to throw money away," an illustration of which is furnished by a statement in the Transactions of the New-York State Agricultural Society, where seven acres of low wet land, manured annually at the rate of 25 loads to the acre, produced 31 bushels of oats per acre; but after being thoroughly underdrained at a cost of about 60 dollars for the whole, the first crop of oats without manure, was 89½ bushels per acre.

RAISING CHESTNUTS.—Chestnuts will not grow rapidly on all soils, but on such soils as are suited to them; nearly all the failures we have known, have resulted from attempts to transplant them. We know of no tree so bad to transplant as this. The best way is to plant the seed in hills, like corn, but rather more remote; pull out all but the most vigorous plant, and they will soon form a beautiful young forest, and obviate all necessity of cultivating the ground, which at first is requisite. Their rapid growth is well known; a correspondent of the Ohio Cultivator, judging from his own experience, thinks that 1400 trees might be raised on an acre, averaging in 20 years 8 to 10 inches in diameter, making four rails the first cut, two the second, and one the third—about 10,000 rails per acre.

☞ "B." on "Raising Horses," will appear in our next. It came too late for this month.

☞ Answers to several inquiries, are necessarily deferred till next month.

FINE FARM.—Any one wishing to purchase one of the best farms in the State, is referred to the advertisement of Hon. JOHN DELAFIELD, in this paper, who, it will be seen, wishes to dispose of the fine farm on which he now resides, near Geneva.

LIVE STOCK INSURANCE.—Owners of high-prized animals would do well to look to the advertisement of the Northern N. Y. Live Stock Insurance Company, in this paper. The names connected with it, afford a sufficient guaranty that the company will fulfil its obligations.

MORGAN HORSES.—Those interested in this breed of horses, are referred to the advertisements of Mr. MOWRY, in this number of the Cultivator. He has now five animals of this breed, embracing some of the highest blood in existence.

☞ Our readers will notice that this number consists of 40 pages—eight more than usual—to enable us to accommodate our advertising friends. *This does not increase the postage on this number.* See extract from post office law on page 155.

☞ Our correspondent, L. L. W., Clear Branch, Va., can obtain the information he desires, by addressing Edwards & Platt, Brooklyn, N. Y. It is not in our power to furnish it.

FINE PIGS.—We copy the following from the report of the Hartford Co. (Ct.) Fair for last year:—"S. E. CHAPMAN, of East Hartford, exhibited a sow, 5 years old, with a litter of 9 pigs, nine weeks old. These pigs 'laid out all others.' They were admired by all who saw them. They were the most beautiful pigs ever seen in this region. One of them, (and there was no great difference in their size,) weighed 74 lbs. the day before the Fair. Mr. Chapman purchased the sow on board of a Liverpool packet in New-York, when she was about 6 months old. She was an English shoat, of fine points. He raises two litters a year from her, for which he gets $5 each. She brings him in about $80 a year, her pigs being considered greatly superior to any others produced in this region." Mr. C. writes us that Mr. H. Beaumont of East Hartford, fatted two of her pigs—one at 9 months old, weighed 404 lbs.—the other, at 10 months, 422 lbs.

PROFITABLE FOWLS.—The raising of fancy poultry is getting to be quite a handsome business. Mr. JOHN T. ANDREWS of Sharon, Ct., has published, in the Litchfield Enquirer, an account of his success in breeding fowls, from which it appears, that his profit on six pullets of the black Spanish variety, amounted to $181, or $30 each, he having sold 200 chickens at an average of $1.25. Better business than the dairy, that.

APPLYING MANURE.—The following excellent practice is described by a correspondent of the Journal of Agriculture. We have often insisted on the importance of thorough intermixture with the soil, and are glad to see it reduced to practice. "I take much pains to spread the manure as evenly as possible, and harrow it thoroughly with a heavy iron-tooth harrow, first lengthwise and then crosswise the furrow, until the soil is well pulverized and the manure thoroughly incorporated with it." The same writer also remarks, "My manure is under cover during winter, and I am satisfied it is worth nearly double for being housed."

PRIZE CATTLE.—The last London Farmer's Magazine, contains a list of the breeds to which the first and second prizes have been awarded at the Smithfield Club Show of fat cattle, for twenty years. They are as follows:

To Short-horns,	115
Herefords,	128
Devons,	33
Scotch,	7
Long-Horns,	3
Ayrshire,	2
Highland,	2
West Highland,	2
Angers,	2
Galloway,	1
Pembroke,	1

OSAGE ORANGE HEDGES.—Bryan Jackson, of Delaware, informs us through the Boston Cultivator, that he considers this hedge as decidedly the cheapest fence that can be made; and that those planted on his own grounds in the spring of 1849, "are now a good fence, capable of turning horses and cattle." This is but three summers growth. Their rapid growth when young, rendering them capable of being shorn two or three times a year, brings them forward sooner than any other hedge plant.

PRUNING HEDGES.—J. Wilkinson, well known as the principal of Mt. Airy Institute, and who has had much experience in hedging, gives it as his opinion, (in the Prairie Farmer,) more especially in relation to the Osage Orange which has a vigorous growth, that wherever failure has occurred, it has been in consequence of lack of pruning. He has never in a single instance known or heard of a hedge being cut too low or trimmed too often, but on the contrary has known "miles upon miles, ruined so far as small pigs are concerned, by the opposite course." He adds, "I think all the writers in the periodicals for the west, fail, if they fail any where, in not urging a more frequent and relentless mode of pruning, after the first year."

NOT TOO LATE TO PLANT.—The New England Farmer furnishes a communication from H. F. French of Exeter, N. H. in which he says, "Mr. McClintock, of Portsmouth, who is now ninety-four pears of age, this year ate the fruit from trees planted with his own hand when he was *eighty-six*." Another gentleman, having a very fine orchard, said, "I am more than seventy years old, but I have set over a hundred apple trees this fall." Again, he informs us that "Mr. Robinson says that when he planted his orchard with seedling trees more than fifty years ago, his friends told him there could never be a demand for so much fruit!" Yet this same year he says a gentleman of Hampton, in that State, sold fruit from about *four acres* of land this season for $800, and last year for $1400.

AN IMPROVED MEADOW.—Charles Yates furnishes the American Farmer an account of the very successful treatment he gave a five acre meadow, by which he almost doubled the average yield of the three previous years, or increased the number of loads of hay from 19 to 32. The higher parts of the meadow were manured with wood-pile manure, and the lower with clay from a cellar —it was harrowed, sowed with three bushels of plaster, salt, and leached ashes, mixed together, and then rolled with a common roller. The grass was a mixture of timothy, herds grass, and clover. By "herds grass" is

meant, we presume, the *red-top* or *Agrostis vulgaris*, and not the herds grass of the north, which is *timothy*.

THE RED CEDAR FROM SEED.—Isaac Hildreth, a skilful cultivator of trees, states in Moore's New-Yorker, that in no case where the trees hang full of berries, has he been able to find perfect seeds, and in nearly all that he has examined he has found no seed at all; while, where the berries grow scattering and singly, the seed are found perfect. He plants them in sifted leaf-mould, and shades the young plants.

WOOL AND SHEEP.—Dr. Lee, in his Southern Cultivator, in speaking of his tour to the north, says, "Within the last thirty days we have seen a good many flocks of sheep, and pumped all the information we could from their keepers and owners, without finding much that is new in sheep husbandry. Good feed, plenty of salt, protection from vicious dogs, and care to use only the very best males for the increase of the flock, and to have the ewes yean at the proper season, are the cardinal points in this branch of rural industry." He says, "We have no doubt it costs the farmers of the south, all things considered, as much to grow 100 lbs. of poor wool, filled with dirt and burs, which sells at $15, as it need to cost to produce a like weight of clean good wool worth $30."

PUNCTUALITY.—Few are aware how much time is lost by a want of punctuality. Twenty men meet together for business, detained fifteen minutes by the slack-twisted habits of one, lose in all no less than *five hours* of time—a donation which they have to make usually with no thanks, or a very faint and flippant apology. A celebrated Frenchman, employed in arduous official duties, found that his wife was habitually ten minutes too late in coming to dinner. He found the difficulty incurable; and therefore determined to write a book. "He fixed on his subject, thought of it during his walk to and from home, wrote during these ten minutes every day and no longer, and in the course of a couple of years published one of the most able books of the age."

INVERTED CROPS VS. FREQUENT PLOWINGS.—A gentleman in Maryland, (says Timothy Pickering,) plowed up part of a field of clover in March, but failing to plant it, treated it as summer fallow by repeatedly plowing it, and sowed with wheat in September. The residue of the clover field was mown twice, plowed once, and sown with wheat the same day as the other. The fallowed part yielded only 14½ bushels per acre; the other part, besides the two crops of clover hay the preceding year, yielded 24½ bushels per acre.

TASTE.—The Michigan Farmer gives us a very good hint about some noted specimens of false taste, observed at the World's Fair. He thinks the painter and sculptor should copy nature; hence objects to such flagrant violations as "a nest of little marble cupids, as if hatched from eggs—cupids, snakes, and other animals carved upon pillars for sustaining a mantle-piece, and on the mantle itself, as if they were fire-proof, or delighted in being roasted—marble urns, big enough to crush a dozen men, supported by a slender-made man underneath—fountains, with streams issuing from the mouth of a carved goose," &c. &c.

GOPHERS.—The following mode of treating this animal, so troublesome in some parts of the western states, communicated to the Prairie Farmer, may be elsewhere useful as applied to other depredators. "When they are throwing up the ground their hole will be open—put a little arsenic or strychnine into a potato, and roll it into the hole, and the gopher will trouble you no more."

Postage of the Cultivator and Cultivator Almanac.

We re-publish the following, from our Jan. No., and add a letter from the Department, deciding that the *Cultivator Almanac* is subject only to the *same charge as a single number of the paper itself*, when sent to subscribers.

POST-OFFICE DEPARTMENT,
Appointment Office, Nov. 24, 1851.

SIR—I have received your letter of the 20th inst. The "Cultivator" is considered as being under the classification of a "newspaper," as that term is defined by the 16th section of the act of 3d March, 1845; and it therefore is entitled to all the benefits granted to, and subject to all the restrictions imposed by law on such publications.

Respectfully yours, S. D. JACOBS,
1st Assist. P. M. Genl.

The postage on the Cultivator is therefore as follows:

For any distance not exceeding 50 miles,			5 cents	*per year.*
Over 50, and not exceeding 300 miles,			10 cents	*per year.*
Over 300	"	1,000 miles,	15 "	"
Over 1 000	"	2,000 miles,	20 "	"
Over 2,000	"	4,000 miles,	25 "	"
Over 4,000			30 "	"

To prevent any misapprehension we quote the 16th section of the law of 3d March, 1845, referred to in the above letter. It is as follows:

SEC 16. And be it further enacted, that the term "Newspaper," hereinbefore used, shall be, and the same is hereby defined to be any printed publication, issued in numbers, consisting of not more than two sheets, and published at short stated intervals of not more than one month, conveying intelligence of passing events, and *bona fide extras and supplements* of such publication."

By this extract it will be seen that the *Pictorial Cultivator Almanac* is entitled to go to our subscribers as a supplement to The Cultivator, it being a "*bona fine supplement*" to it, and nothing else. The Almanac is not published for sale, and is sent only to subscribers to the Cultivator.

POST-OFFICE DEPARTMENT,
Appointment Office, Jan. 28, 1852.

SIR—I have received your letter of the 23d inst., asking whether the "Cultivator Almanac" ought to be considered as a Supplement to the Albany Cultivator, and rated with postage as such, or be considered as a transient publication, and rated accordingly.

A "Supplement," to come within the provisions of the law which allows such issues to be sent to subscribers at a postage equal to the sum paid on a single number of the principal publication, at subscription rates, ought not to exceed three ounces in weight, and should contain such matter only, as will supply that which is wanted to make the principal publication complete.

Upon examination of the "Cultivator Almanac," I have come to the conclusion that it may be considered as a Supplement to the Albany Cultivator. Respectfully yours, S. D. JACOBS,
1st Assist. P. M. Genl.

Jacob Allen, Esq., P. M. South Hartford, Washington Co., N. Y.

Albany Prices Current.

ALBANY, Tuesday, March 16.

FLOUR.—Our market, which, at the date of our last report, was buoyant, with an upward tendency, has become dull and heavy, with only a limited home and Eastern demand. Quotations may be given at $4.62½a4.87½ for common to good State and Michigan, $4.87½a5.12½ for fancy State and Michigan, $5.12½a5.25 for extra Ohio, and $5.37½a5.50 for extra Genesee. Buckwheat sells at $1.50.

GRAIN.—Wheat has followed the dullness in flour, and the sales since our last have been on a limited scale, we quote sales of only 3300 bushels in lots, at 114c. for fair Genesee, and 117c. for a prime lot delivered at the East Railway Depot. In corn the sales include 4,000 bushels, yellow round, to arrive at the railway, part deliverable between 1st and 15th March, and part between the 10th March and 10th April, at 63½c. Also, 2,000 do., delivered at the road, at 68½c. The only sales of Barley are 3,000 bushels two rowed, at the road, at 72c., 3,000 do. do for delivery on board a boat at the opening of the river, at 75c., and 900 do. do. at the road at 70c.; there are free sellers of Barley, taken as it arrives at the road, at 71a72c. Barley malt retails at 93a94c. A sale of 4,000 bushels Rye was made, deliverable in N. Y. at the opening, at 75c. The street trade in grain is

moderately active, we quote Oats 37½a38c., Corn 66a67c., Rye 71a 72c., Barley 68a72c., Small Peas 75c., Marrowfats $2a2.25.

SEEDS.—During the last week have had a dull but firm market in Clover, owing to the favorable advices from Europe and the large shipments from New-York and Philadelphia; we quote medium at 9¾a10c.; large 10½c. Timothy $2a3. Flax $1.25.

PROVISIONS.—We notice an advance in all descriptions, with a good market, especially for the retailers. The continued favorable advices from New-York and New-Orleans can not fail to be without its influence on our market. We quote prime pork $14 50a15, mess do. $17. Beef, $10 for mess. Smoked beef 9½c. Lard 10c. Smoked hams 10a11c., shoulders 8c. Butter 20a21c. for State and firm. Cheese scarce at 7½a8. The sales during the last week include 350 pkgs Canadian butter, to a New-York operator, at about 18c.; 34 bls. clear pork, early in the week, at $17; 108 bls. Michigan mess beef at $9, and 75 do. Western prime pork at $13, and now held for advance. At New Orleans mess Pork on 13th was firm at $17. At New-York the stock had fallen off to 5,000 bls. of which 1,000 do. was old.

HOPS are in light retail demand at 27c.

WOOL.—The sales in this market, since our last, embrace 19,000 lbs. Delaine at 40a41c., and 20,000 lbs. fine fleece at p.t.

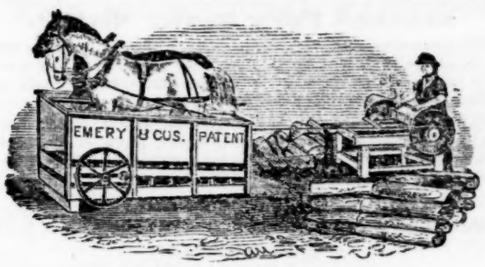
The N. Y. Dry Goods Reporter, of Saturday, says of the Domestic Market: The operations of the week have been to considerable extent, but prices are so carefully guarded that it is impossible to arrive at any other conclusion than a material decline. The sales that have come to our knowledge are 25,000 lbs. decidedly fine on private terms; 18,000 lbs. medium at 38c.; 10,000 lbs. at 43c.; and 4,000 lbs. country pulled at 37½c. We think every thing tends to the depression of prices for wool. Manufacturers appear to be well supplied, while the low rates for fabrics will cause many to stop a portion of their machinery.

In reference to the market for foreign wools the Reporter says:

We notice an increased activity in this mardet, with sales aggregating 12a1500 bales, 1200 of which (all the stock held by one heavy importer) were sold to a large eastern consumer on private terms. We are unable to learn the particulars of the above heavy sale, but know enough to say it includes Mogadore, African, Smyrna, and some unwashed Spanish. We also quote sales of 70a80 bales unwashed Smyrna at 14c., and 50a60 bales washed Cordova at 21c.

At Boston the market has been very quiet for both fleece and pulled wool, and the tendency of prices is in favor of buyers; sales moderate in the range of quoted rates. In foreign there have been sales of 70 bales of Cape of Good Hope on private terms; and one of our large manufacturers has been purchasing some 1800 bales African and other foreign wool in New-York on terms we did not learn.

At Philadelphia the demand has been limited, but prices are steadily maintained. Sales of 40,000 lbs. within the range of 34a36c. for common and fine Washington co.



EMERY & COMPANY,

Sole Manufacturers for the United States,

OF THE

New-York State Agricultural Society's

FIRST PREMIUM

RAILROAD HORSE POWER,

Patented by H. L. EMERY, February 24, 1852.

Manufactory, on Hamilton, Liberty and Union Streets; Warehouse and Sale Rooms, Nos. 369 and 371 Broadway,

ALBANY, N. Y.

THE above Horse Powers have been awarded the highest Premiums at the Fairs of the New-York State Agricultural Society in 1850, and again in 1851; also, the highest Premium at the Michigan State Fair, at Detroit, Mich., in September, 1851, where a majority of the Committee owned and were using Wheelers' Powers on their farms, having purchased them previous to seeing our own; also a Gold Medal at the American Institute in 1851. It was also exhibited at the State Fairs of Ohio, Maryland, and Pennsylvania, and received the highest awards which could be given by the rules of their Societies. In every case, it has been in competition with all endless chain Powers of any note in this country.

Over SIX HUNDRED setts of the above Powers were sold and put in use from June to January last, not one being returned or failed.

To enable the public to distingush the above Horse Power from all others, we here show its principal, and most important parts, by diagrams and references—beside like diagrams and references of the Rack and Pinion Power, as made by ourselves, Wheelers, and others; and also the Rack and Pinion with epicycloydal teeth, which has long been successfully used in this vicinity, and which, with our recent improvements, in its adaptation and application to our Horse Power machinery, places it the first on the list of Rack and Pinion Powers.

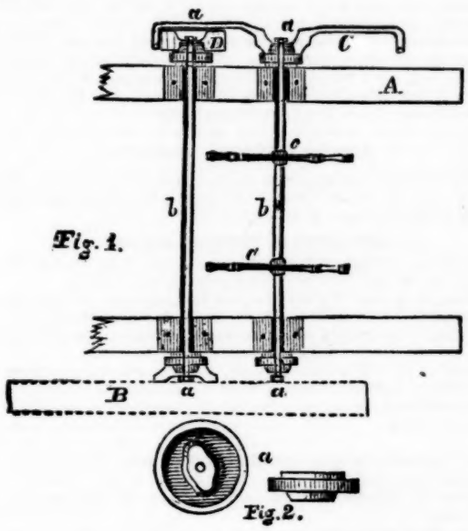


Fig. 1.

Fig. 2.

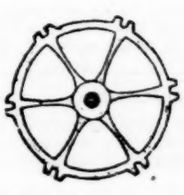


Fig. 4.

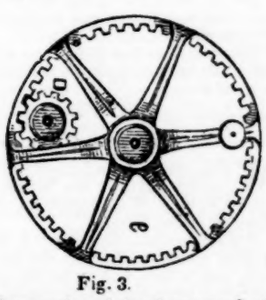
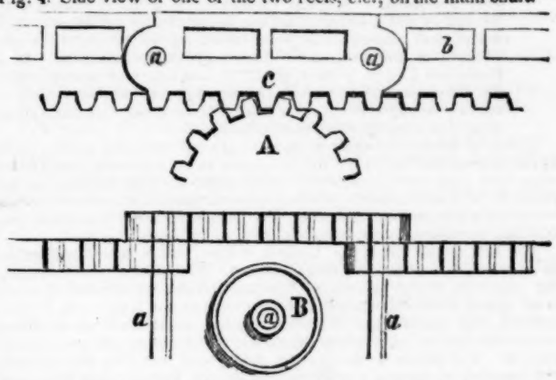


Fig. 3.

Top view of the Running Gear, and a portion of the frame work of H. L. EMERY'S Patent Changeable Railroad Horse Power.

Fig. 1. A A.—Main sills or timbers of the power supporting the shafts.
B.—Band pulley upon one of the shafts.
D.—Pinion, or small gear, upon the same shaft with pulley.
C.—Converge or internal gear upon the main shaft, and working into and over the pinion.
b.b.—Main and counter shafts of power.
c.c.—Reels upon the main shaft, which support the endless flooring in its circuit, and carry the shaft.
a.a.a.a.—Couplings upon the ends of the shafts, fitting all the pullies and gears.
Fig. 2. Shows a side and edge view, (enlarged,) of the couplings.
Fig. 3. Side view of converge or internal gear and pinion.
Fig. 4. Side view of one of the two reels, c.c., on the main shaft.

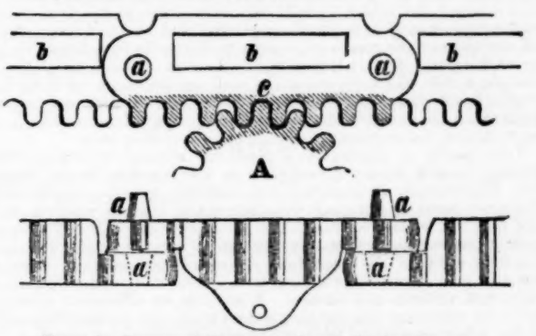


Common Rack and Pinion Power, as manufactured by ourselves, Wheelers and others.

B.—Side view of one of the 72, (or 36 on each side,) small truck or friction wheels, which traverse with the endless flooring—being about 3¾ inches diameter.

C.—Side view of one of the 72, (or 36 on each side,) links or segments of the chain, each of which are six inches long, as seen connected with others. a.a.a.a.—The eyes of the links and small rods crossing the power and extending through the links, and far enough outside to receive the small trucks.

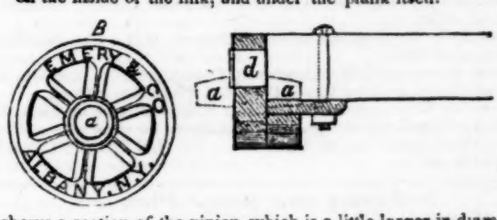
A.—Side view of a section of one of the pinions or small cog wheels, two of which are placed upon the main shaft, and receive the motion and force from the cogs on the links of the chain. This pinion is about four and a half inches diameter, and the band pulley is used upon the same shaft, which for threshing, is four feet diameter. The lower view represents the teeth or cogs, as seen with links inverted.



Emery's Improved Patent Rack and Pinion Power, with cycloydal teeth.

c.—Shows a side view of one of the links or sections of the chain, of which there are but sixty, or thirty on a side, and are each seven inches long; every alternate link is cast with dowels, a.a.a.a.a.a., projecting each side; those on the inside connecting with the other links, while those on the outside receive the truck wheels, thus avoiding the necessity of the small shafts, and expense of fitting up. The eyes of the links and truck wheels are cast upon steel chills—making a perfect, and hard smooth surface, which will not wear or break—while the dowels are sufficiently large and strong to withstand more than the cogs themselves.

The lower edge of each link is widened equal to the face of the pinion, and the cogs made to extend the whole width of the pinion, as shown in the lower cut, representing the link inverted, presenting double the strength and driving surface, as shown in the last kind; every alternate link is confined to the plank flooring by a small screw bolt passing through a flange upon the inside of the link, and under the plank itself.



A.—shows a section of the pinion, which is a little larger in diameter than the last—the teeth of which are cycloydal in form—as are those on the links working into them—which is acknow-

ledged by all mechanics and engineers to be the strongest and most perfect form of teeth, and works with less friction and wear, as the driving surfaces present to each other a rolling, instead of sliding friction; this kind of teeth, on account of their rounded form, work much deeper into each other, and have little or no inclination to lift out of gear.

The last cut shows the construction of the truck wheels, which are 1¼ inches larger in diameter, and revolve on larger circles at the ends of the power—giving them an advantage over the smaller wheels. A section of a link is shown with the end of the flooring attached; these planks are all one inch wider, and consequently wear up by use much closer, before bending or breaking under the weight of the animals. As a Rack and Pinion Power, the latter has every advantage over the common kinds in use; is manufactured at a less cost; is equally strong and durable, and is more easily handled, as its weight is some two hundred pounds less.

Either of the above kinds of powers are offered to the public, each upon its own merits, with a full warranty as to workmanship, materials, and operation, (and with a guarantee of right of using in all parts of the United States,) subject to be returned within three months—and purchase money refunded. For prices, &c., see Illustrated Catalogue, furnished gratis on application, or by mail.

The first on the list is the highest in cost, and is found preferable in all cases, and under all circumstances. The power of the revolving platform being applied to the main shaft, by means of reels with larger diameters than the pinions used in the Rack and Pinion powers, the stress upon the several parts is in no way as great—and the liability of wear or breakage, from use or accident, is removed. The whole of the gearing consists of less than one-seventh the number of cogs in the Rack and Pinion Power; and these are wholly removed from under the horses to the outside of the power—free from dirt, dust, &c., and always easily kept in order or cleaned, which is an advantage over all Rack and Pinion Powers. This power has also the advantage of the changing of force and velocity to accommodate it to any variety of work, without any additional cost or danger to the gearing or other parts. When the main shaft runs but fifty-six revolutions per minute, the diameters of the gears are such as to increase or decrease the velocity to two hundred and twenty-four, or as slow as fourteen revolutions per minute, when the animal, (either horses or oxen,) walk but two miles per hour—being about two-thirds the travel which is necessary with the Rack and Pinion Powers, to produce the same effect. This last fact is one of its principal features, and of the greatest importance to the farmer. The gearing, as well as pullies and couplings, all agree, and can instantly be transposed—each to each, and side to side. In this power the centers of motion of the gears are always in the same position to each other—requiring no guard or binding track over the chain above the pinions, to keep the gears together, as is absolutely necessary with all rack powers, and which serve to check the force of the power; and as the driving faces of the teeth on the rack and pinions become worn off, the loss of force increases, until they eventually stop, break, or slip by each other. The length of the sections or links of the chain, as also the width of the planks of the flooring, are same as in the Improved Rack Power last described. With the above advantages, together with the epicycloydal form of teeth, adopted this season in its construction, the superiority of this power is readily seen.

This power is admirably adapted for driving Threshing Machines, Circular Saws, Cotton Gins, as also Machine Shops, Elevators, Ferry-boats, Discharging and Loading vessels, Pile-driving, Cross-cut sawing, Pumping, Grinding grain, Churning Butter, Cutting Hay and Stalks, Shelling Corn, Grinding Apples, &c. The angle of elevation necessary to operate this power, is never greater, but often less than either of the others here described, and which is inside of one and a half inches to the foot, with horses weighing 1000 pounds each, and without any harness. It has also an admirable arrangement for adjusting and tightening the chain, *not possessed by either of the others*—together with an improved brake for stopping the whole instantly—all within the power, and independent of the band and pulleys, and does not require to be changed, when gears and pulleys may be. The pulley used for threshing, with this power, is but three feet diameter, to effect the same as a four foot wheel does with the Rack and Pinion Power

In all cases the shafting of all machinery manufactured by us is made to run in Babbetted Boxes, they being the most durable and perfect box in use—and not generally used by other manufacturers.

Devon Bulls for Sale.

THE subscriber offers for sale, two young Devon bulls, called "Washington" and "Ajax."

Washington was dropped the 28th March, 1851. Sire, bull Molton—grand sire, celebrated bull Major, bred by R. C. Gapper, and now owned by Lewis G. Morris, Esq. Major took the first premium at the State Fair at Albany, in 1850—and is admitted to be the best Devon bull ever brought into the United States.

Dam of Washington, cow Beauty—grand dam, cow Sophia—both bred by Ambrose Stevens, Esq., and both received the highest premiums in their respective classes at the State Society's Shows, in 1849 and 1850.

Bull Ajax, was dropped the 7th of August, 1851. Sire, bull Molton—dam, cow Ruby.

Ruby was bred by Mr. Cowles of Farmington, Ct., and was sired by bull Rover, bred by Lewis F. Allen, Esq., Black Rock.

Price for Washington $75, for Ajax $50, or will be exchanged for Heifers of equal age and pedigree. Address the subscriber at Greenwich, Washington co., N. Y. LE ROY MOWRY.

April 1—3t.

Prouty and Mears' Plows.

A LARGE assortment can be found at the State Agricultural Warehouse, No. 25 Cliff street, New-York.

March 1—2t. LONGETT & GRIFFING.

Ketchum's Patent Mowing Machine.

THE subscribers having entered largely into the manufacture of the above Mowing Machine, are now prepared to supply orders for the same from all parts of the United States, and hesitate not to sell the Machine under the following

WARRANTY.—On lands free from obstructions, we warrant our machine to cut and spread from ten to fifteen acres per day, (of any kind of grass,) with one span of horses and driver, and do it as well as is done with a scythe by the best mowers.

The Price of the Machine is $110, with extra cutter, &c.

Buffalo, April 1—1t.* HOWARD & CO.

TESTIMONIALS.

Buffalo, Erie co., N. Y.

DEAR SIR:—Having had the pleasure of witnessing the performance of your Mowing Machine, yesterday, in Col. Bird's meadow, below Black Rock—(the surface of which was quite uneven,)—we assure you that we consider it one of the most valuable Agricultural implements ever brought into use. The grass was cut better than it could have been done with a scythe, and with a facility and expedition truly astonishing. We have no hesitation in saying it is all a farmer could desire for cutting his grass.

LEWIS F. ALLEN, President N. A. State Ag. Society.
O. ALLEN, Mayor of the City of Buffalo.
T. C. PETERS, ESQ.
HON. GEO. W. PATTERSON.

Buffalo, December, 1851.

We have used Ketchum's Mowing Machine during the past season, and find it a most valuable improvement in cutting grass. On meadows free from stumps and tolerably smooth, it will cut, with a good team and competent driver, from six to eight acres in half a day, better and more even than it can be done with a scythe, and when done, the grass is left evenly spread on the ground where it grew. We confidently recommend it to the patronage of the farming community.

THOMAS C. LOVE.
SAMUEL TWICHELL.
MORGAN BUTLER.
A HITCHCOCK.

East Genoa, Cayuga co, N. Y., August, 1851.

DEAR SIR:—The Mowing Machine I purchased of you last June, has more than answered my expectations. I find it will work upon ground quite uneven, and there is less risk from injuring it from stones than most persons would suppose who have no experience in its use. I find it will cut all kinds of grass, and do it well, when properly managed. Persons who have large quantities of grass to cut, with tolerably smooth ground, will find it much to their interest to use one of these machines. HORACE LEAVENWORTH.

Messrs. HOWARD & CO.—SIRS:—I have cut the past season 120 acres with one of your grass cutters, and I do say it is one of the greatest inventions of the age for labor-saving. It cuts very close, and is easily kept in cutting order. It will cut 1¼ acres per hour of grass that will yield two tons and over to the acre. Since using it, I consider it indispensable on a farm like this. H. MOUNT.

Tiffi's Farm, Black Rock, February, 1852.

Morgan Horse Trustee.

THIS horse will stand, (for a limited number of mares,) the present season, at the Farm of the subscriber, within five minutes drive of Union Village, Washington county, N. Y.

Pedigree of Morgan Trustee.

Sired by the old Gifford Morgan—gr. sire, the Woodbury or Burbank Morgan—gt. gr. sire, the original Justin Morgan horse.

His dam was sired by old Morgan Bulrush—his gr. dam by Morgan Fortune—his gt. gr. dam by the original Justin Morgan.

The dam of Morgan Fortune was sired by the original Justin Morgan.

CERTIFICATE.—We hereby certify the above to be a correct pedigree of Morgan Horse Trustee, bred by us, and this day sold to Mr. Mowry of Washington county, N. Y. Signed, Walpole, N. H., March 5th, 1852. FREDERICK VOSE.
BENJAMIN GATES.

It will therefore be seen that Morgan Trustee is of exactly the same degree of Morgan blood, as was the old Gen. Gifford Morgan. The old Gifford being dead, Trustee is the highest blooded Morgan stud now living.

He is a dark mahogany bay color, with black main and tail; of fine form and action, and will be four years old the 16th day of May, 1852. Terms $10 to ensure a foal

Mares disposed of before the usual time of foaling, will be considered in foal, and charged accordingly. LE ROY MOWRY,

April 1—3t. Greenwich P. O., Washington co., N. Y.

Horse Gen. Gifford Morgan,

WILL stand, for a limited number of mares, the present season, at the Farm of the subscriber, within five minutes drive of Union Village, Washington co., N. Y., and at the same stable with Morgan Horse Trustee.

Gifford Morgan, was bred by Wm Arnold of Walpole, N. H. He is three years old the 24th day of May, 1852—is a horse of splendid form and action, and a perfect pattern of his celebrated sire. His color is a beautiful dapple chestnut. He was sired by the old Gen. Gifford Morgan His dam is one of the best mares in that section of country, and whose colts invariably bring exorbitant prices.

Terms $10, to ensure a fold. Mares disposed of before the usual time of foaling, will be considered in foal and charged accordingly

LE ROY MOWRY,

April 1—3t. Greenwich P. O., Washington co., N. Y

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ILLUSTRATIONS.

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